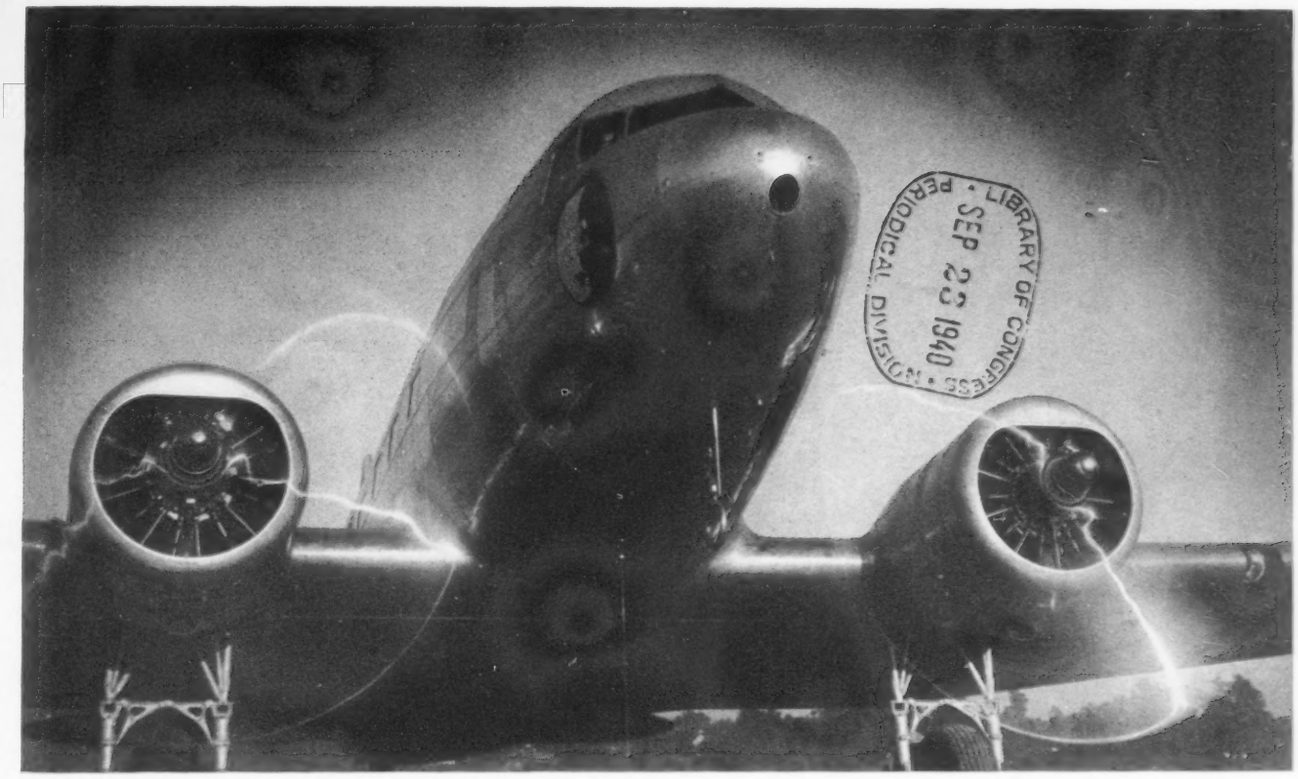
SEPT. 1940

COTTON

SERVING THE Textile Industries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CONTACT

WHEN urgent demand has made it imperative to secure increased facilities and efficiency, industry has been able to turn to Robert and Company with the knowledge that our staff is fully prepared to handle any size or type of architectural and engineering problem.

This has been true for more than a quarter century, during which we have executed more than half a billion dollars of projects in 38 states. It is true today, when definite production problems are facing America. We are ready to help, and will be glad to discuss your problems with you.

ROBERT AND COMPANY
ATLANTA INCORPORATED GEORGIA
Architects and Engineers

When Your Problem Is Lack of
Ready Cash
ADD
Commercial Factoring

Many manufacturers have found this to be the ideal method of raising ready cash.

Under this plan, you receive ready cash from us as your shipments are made—yet you extend your regular terms to your customers. In addition, Commercial Factors Corporation assumes all credit losses and collection expense. Bookkeeping costs are reduced.

Let us explain in detail the great advantages of Commercial factoring as a method of keeping working capital liquid.

COMMERCIAL FACTORS CORPORATION

Fred'k Victor & Achelis, Inc.
Established 1828

Schefer, Schramm & Vogel
Established 1838

Peierls, Buhler & Co., Inc.
Established 1893

TWO PARK AVENUE, NEW YORK

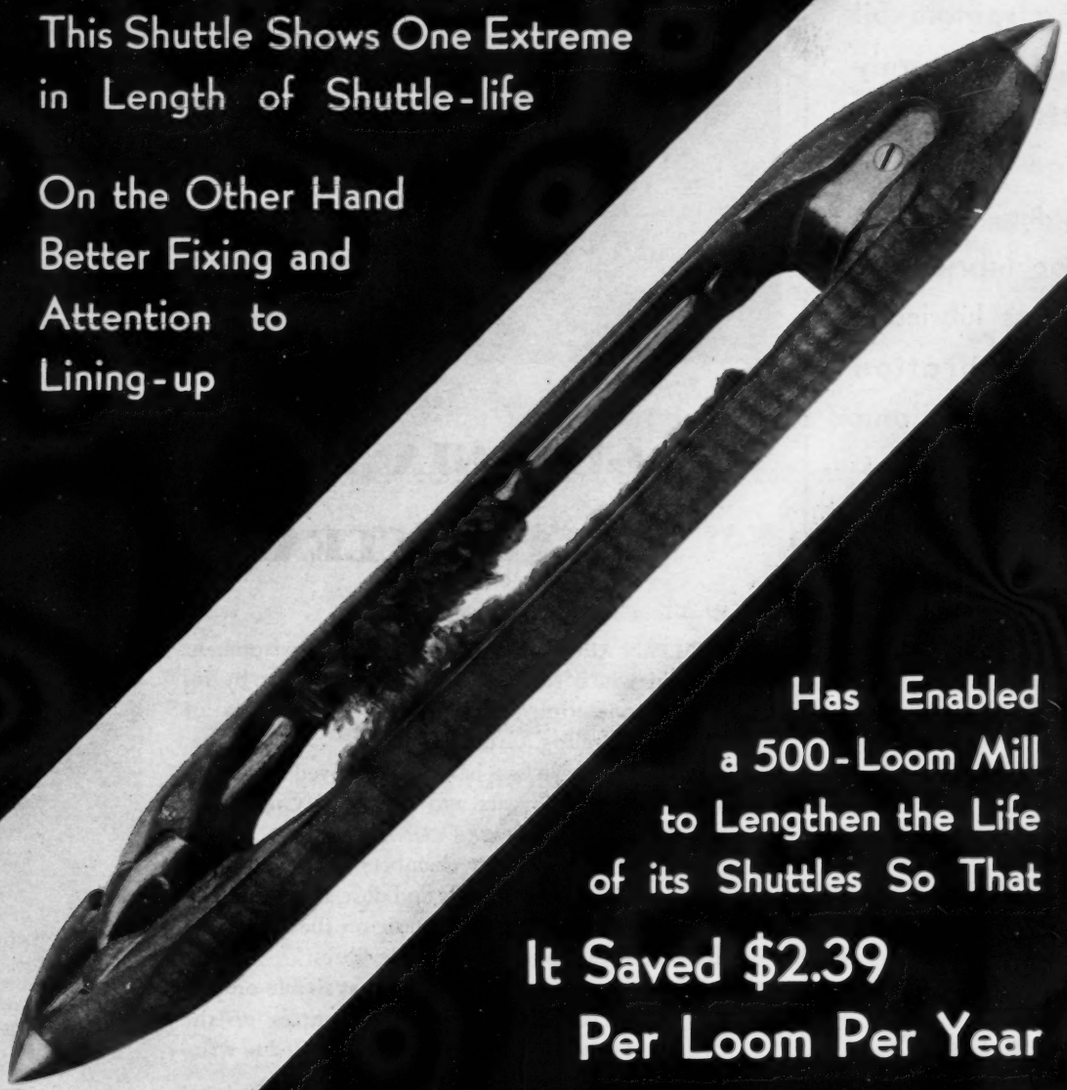
CFC

COTTON is published monthly by W. R. C. Smith Publishing Company, Dalton and Atlanta, Ga., U. S. A.
Subscription Rates, United States and Possessions, $1.00 for one year; $2.00 for three years; Canada, $1.50 per year; Foreign Countries, $2.00 per year.
Entered as second-class matter at the Post office, Dalton, Ga., under the Act of March 3, 1879.

Wrecked in 3 Weeks

By a Poor Reed and Improper Lining-up
of the Reed and Shuttle Box Plates
This Shuttle Shows One Extreme
in Length of Shuttle-life

On the Other Hand
Better Fixing and
Attention to
Lining-up



Has Enabled
a 500-Loom Mill
to Lengthen the Life
of its Shuttles So That

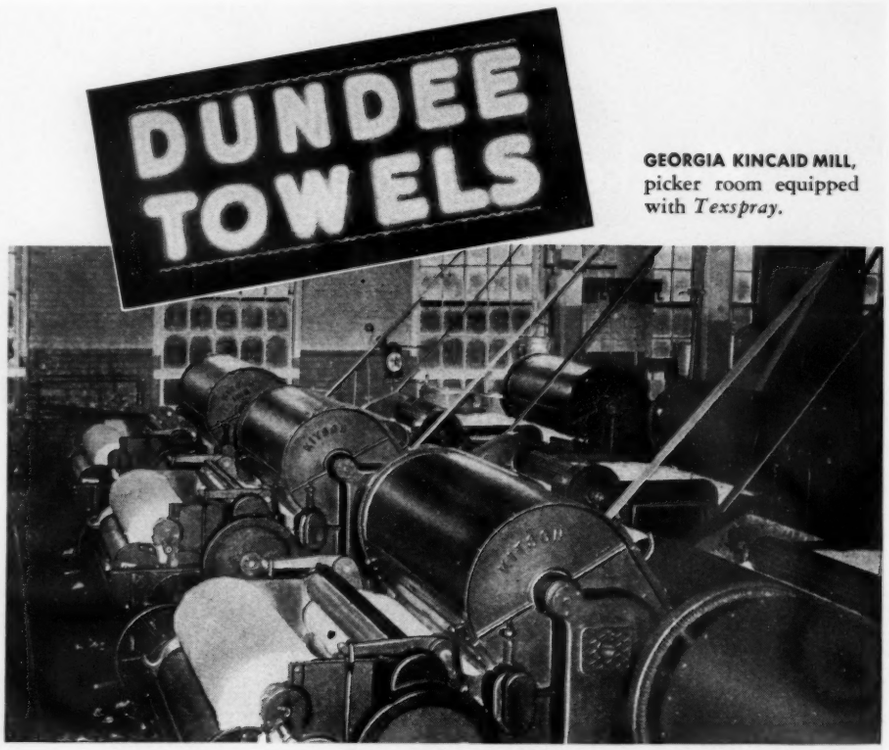
It Saved $2.39
Per Loom Per Year

DRAPER CORPORATION
Hopedale Massachusetts
Atlanta Georgia Spartanburg S C

A SPINDLE SPECIALTY

Texaco Spindura Oil, a spindle oil which stubbornly resists oxidation, sludge formation, "fogging." You get better lubrication with less lubricant, avoid vibration and lagging, and produce more uniform yarn. (Write for this *TEXACO SPINDURA LEAFLET.*)

TEXACO SPINDURA



GEORGIA KINCAID MILL, picker room equipped with *Texspray.*

4 GEORGIA KINCAID MILLS MAKE CLEAN AIR PAY!

CLEAN AIR to breathe and a clean environment in which to work are making money by increased operating efficiency for the makers of Dundee Toweling, Griffin, Georgia.

These improvements have been enjoyed since their adoption some 5 years ago of the *TEXACO TEXSPRAY SYSTEM OF FIBRE CONDITIONING.*

Applied in the beater chambers of their pickers, *Texaco Texspray* reduces fly and dust, increases flexibility of the fibres, reduces static on the cards, and prevents breakage of long usable fibres.

The *Texaco Texspray System* is available only in recognized textile manufacturing centres of the U. S. A. If you are so located, you are invited to write for particulars to:

The Texas Company, 135 E. 42nd St., N. Y., N. Y.

FIBRE CONDITIONING, latest 32-page booklet explaining the *Texaco Texspray System.* Yours for the asking.

☆

TEXACO DEALERS INVITE YOU to tune in The Texaco Star Theatre —starring Kenny Baker and Frances Langford—Every Wednesday Night—Columbia Network—9:00 E.D.T., 8:00 E.S.T., 8:00 C.D.T., 7:00 C.S.T., 6:00 M.S.T., 5:00 P.S.T.

TEXACO

REG. T.M.

TEXACO Texspray System

We bought our year's supply of spindle oil with the money we saved on WARNER CAUSTIC SODA!

Many prominent Southern mills have switched to Warner Textile Grade Caustic Soda—used it with complete satisfaction and made substantial savings as well.

Warner Textile Grade Caustic Soda has no turbidity. Its salt content is low. Its iron content is as low, or lower than any caustic soda made by any method.

Warner Caustic Soda is furnished in standard 50% and 70% concentrations—as well as in 73% concentration shipped in specially lined tank cars. Also flake or solid. Why not order a car for prompt shipment?

WARNER CAUSTIC SODA

Phosphoric Acid
Sodium Phosphates
Bromine
Chlorine, Liquid
Tetra Sodium Pyrophosphate
Liquid Caustic Potash
Carbon Tetrachloride
Trichlorethylene
Perchlorethylene
Carbon Bisulfide
Sodium Sulfide
Epsom Salt
Hydrogen Peroxide

WARNER

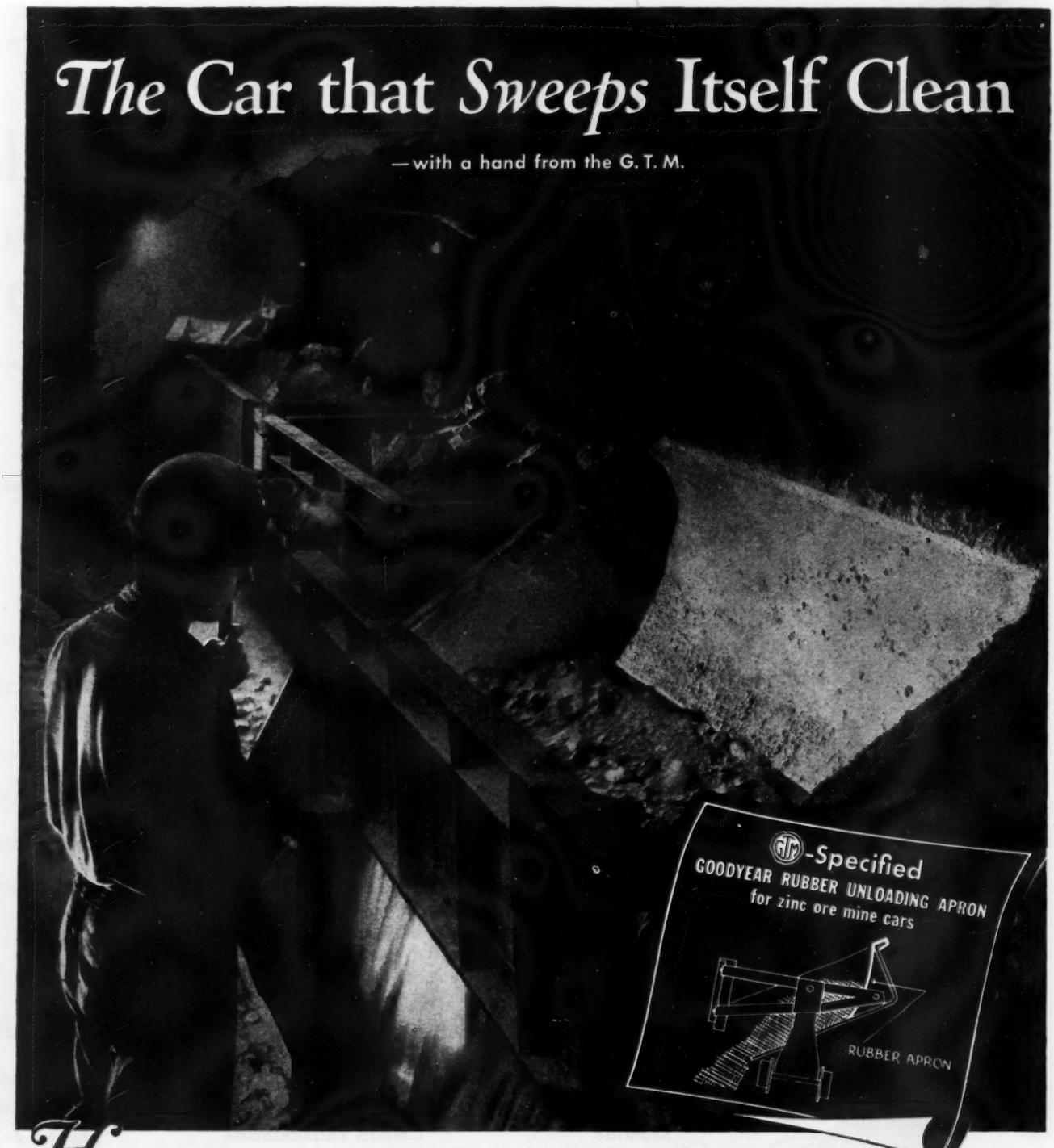
CHEMICAL COMPANY ☆ DIVISION OF

WESTVACO CHLORINE PRODUCTS CORPORATION

CHRYSLER BUILDING, NEW YORK, N. Y.

The Car that *Sweeps* Itself Clean

—with a hand from the G. T. M.



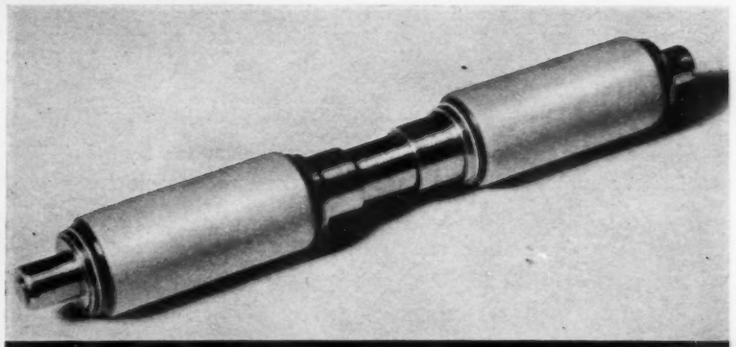
Here you see how a bottleneck in a large zinc mine was broken, through an ingenious application of rubber by the G. T. M. — Goodyear Technical Man. Dump cars that wouldn't dump were the trouble. Wet, soggy ore was the reason. Ore stuck so tenaciously inside the cars, particularly in the lower back corner, that a third or more of every load had to be laboriously scraped out by hand — a slow costly operation. Since wet ore does not adhere to rubber, the G. T. M.'s answer to this sticker was to line the back of the cars with an apron of tough, smooth Goodyear Armadillo rubber-sheeting, firmly clamped at the top, free to swing at the bottom. Now, when a car dumps, the rubber apron swings forward, sweeping the ore before it and emptying the load in a jiffy. *This installation is typical of scores of new uses of rubber developed by the G. T. M. to expedite the handling of all types of materials from zinc to acids. To consult him on your problem, write Goodyear, Akron, Ohio, or Los Angeles, California — or phone the nearest Goodyear Mechanical Rubber Goods Distributor.*

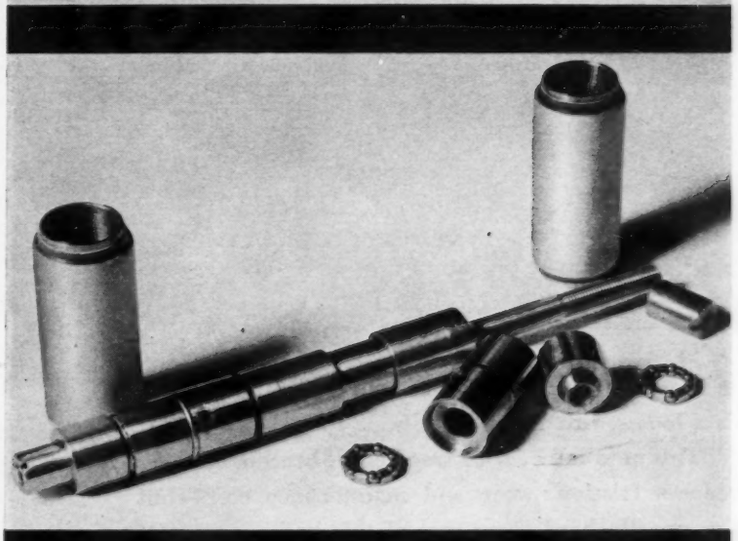
THE GREATEST NAME IN RUBBER

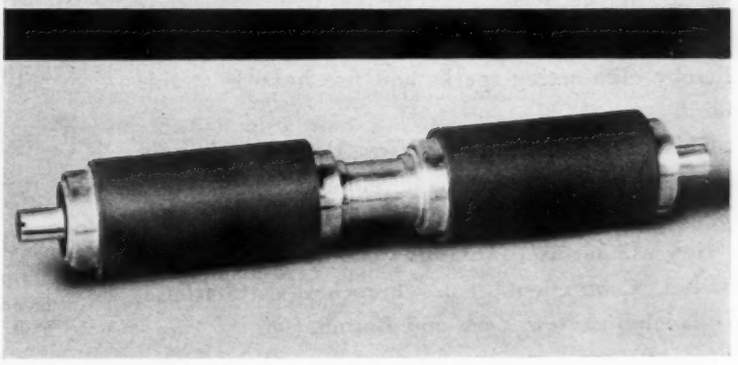
GOODYEAR

At last

A TRULY LINT-PROOF LOOSE BOSS TOP ROLL FOR SPINNING AND ROVING FRAMES







An original type of shell roll that is superior to anything heretofore available for textile machines.

The arbor is formed from a single piece of hardened steel designed to give equal weight distribution, with ball races correctly spaced for best load-carrying qualities.

Shells are securely locked in position during operation, but are easily removed for buffing or covering.

Long life lubrication eliminates daily oiling nuisance.

No grease or oil stains on your yarns.

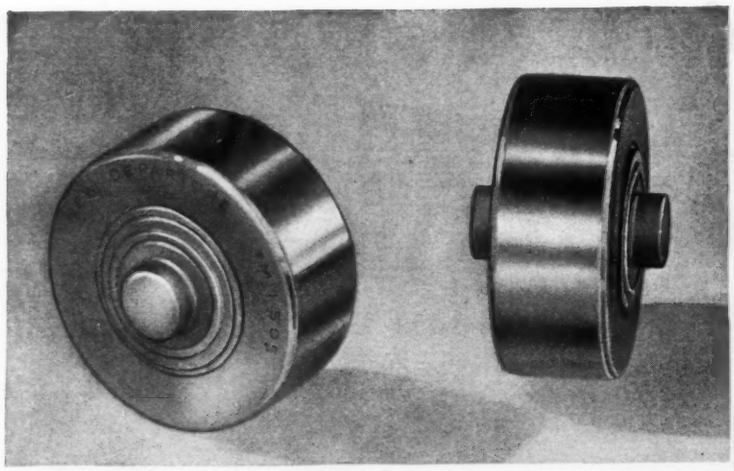
The entire assembly is effectively sealed against lint and dirt.

Specify the NEW Whitin Ball Bearing Shell Top Roll on all new Spinning and Roving Frames, or when replacing your present equipment.

WHITIN MACHINE WORKS

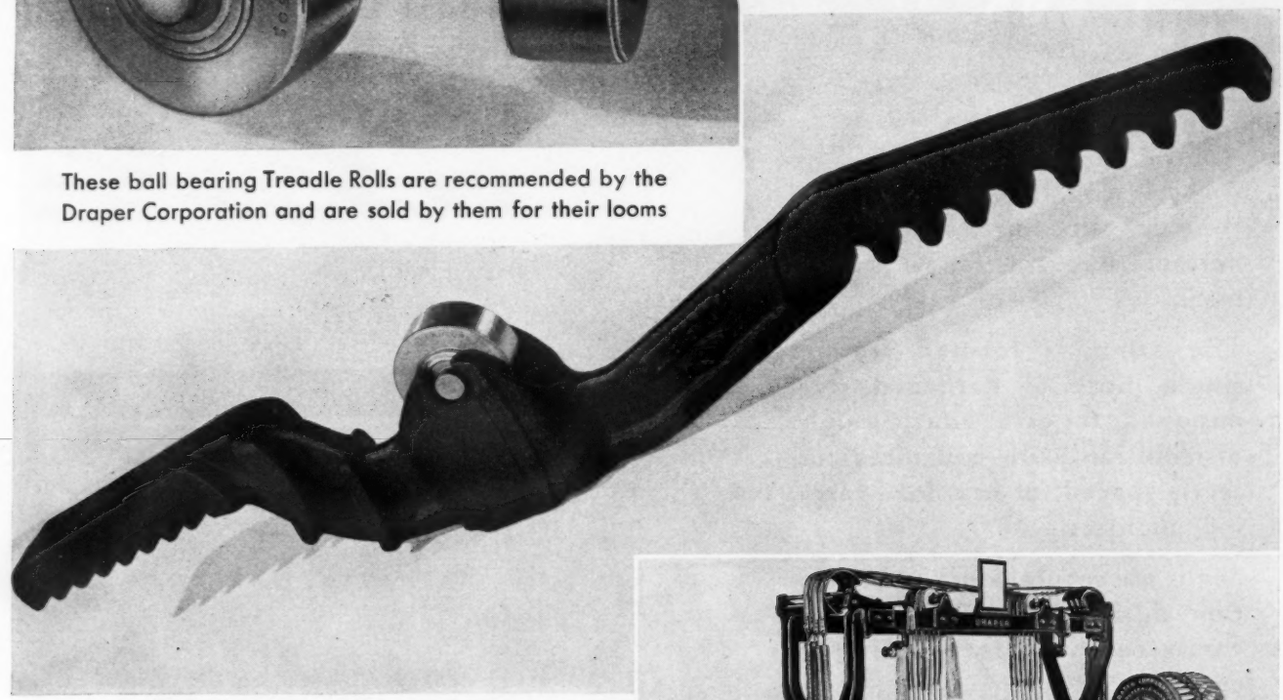
WHITINSVILLE, MASSACHUSETTS, U. S. A.

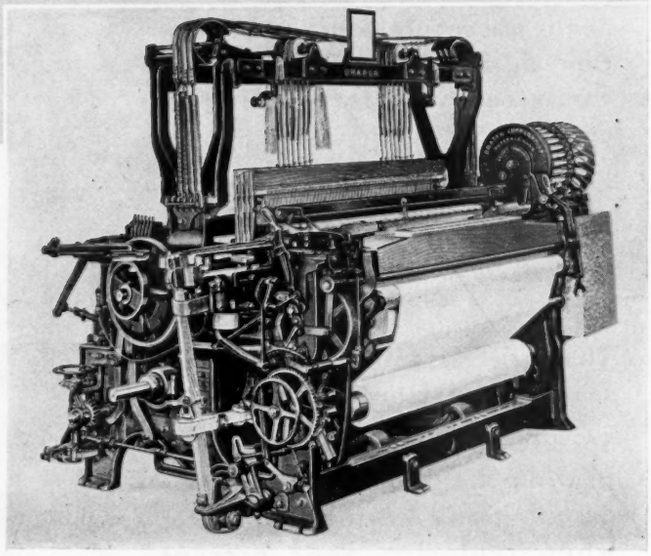
CHARLOTTE, N. C. ATLANTA, GA.



These ball bearing Treadle Rolls are recommended by the Draper Corporation and are sold by them for their looms

Good-bye FIRE HAZARD!





DRAPER LOOMS equipped with New Departure treadle roll ball bearings are better prepared than ever for higher speeds.

● Gone is the likelihood of sparks and flashups in cam looms with Treadle Rolls.

This new ball bearing treadle roll bearing not only reduces friction, wear and maintenance cost—but the smooth, hard outer race of this bearing actually burnishes and "heals" rough surfaces on its cam, thereby eliminating sparks and fire hazards at this point.

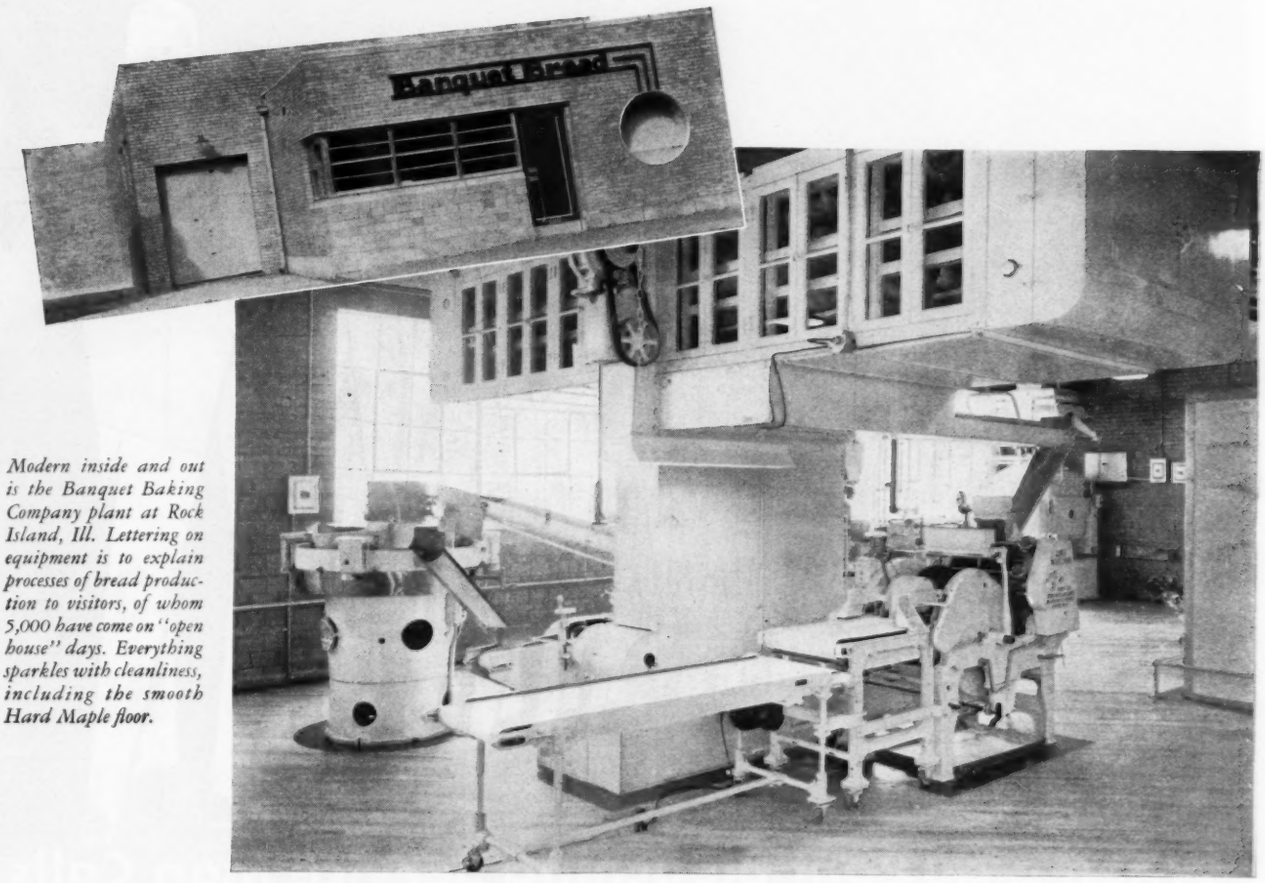
This "new departure" by New Departure is only one of the many cost-cutting developments in bearings for the textile field.

New Departure, Division of General Motors, Bristol, Connecticut. Sales branches at Charlotte, Philadelphia, New York and Boston.

NEW DEPARTURE

PIONEER OF THE SELF-SEALED BALL BEARING

2915



Modern inside and out is the Banquet Baking Company plant at Rock Island, Ill. Lettering on equipment is to explain processes of bread production to visitors, of whom 5,000 have come on "open house" days. Everything sparkles with cleanliness, including the smooth Hard Maple floor.

"We Profited by the Experience of Others!"

Says N. A. GEORGE, *Manager, Banquet Baking Co.*

If you were entering the baking business for the first time, like the Coin brothers of Rock Island, Illinois, owners of this $100,000 plant, how would *you* go about selecting equipment and materials?

"Before definitely deciding on the details of our new building," writes N. A. George, the manager, "we visited several of the finest bakeries in the country, making observations so we might profit by the experience of others.

"No small amount of thought was given to the type of floor. After checking all types of available flooring, both wood and other construction, we concluded that Northern Hard Maple would be the ideal material. We believe that our floors of Northern Hard Maple are beautiful and easily kept so, serviceable, and very economical over a period of years."

As with bakery floors, experience always says "Hard Maple for textile mill floors." For no other flooring offers Maple's combination of beauty, sanitation, comfort, easy cleaning, little maintenance, and long life.

By specifying **MFMA** *Maple—in strips or blocks—you insure receiving all Northern-grown Hard Maple, association-supervised and guaranteed.*

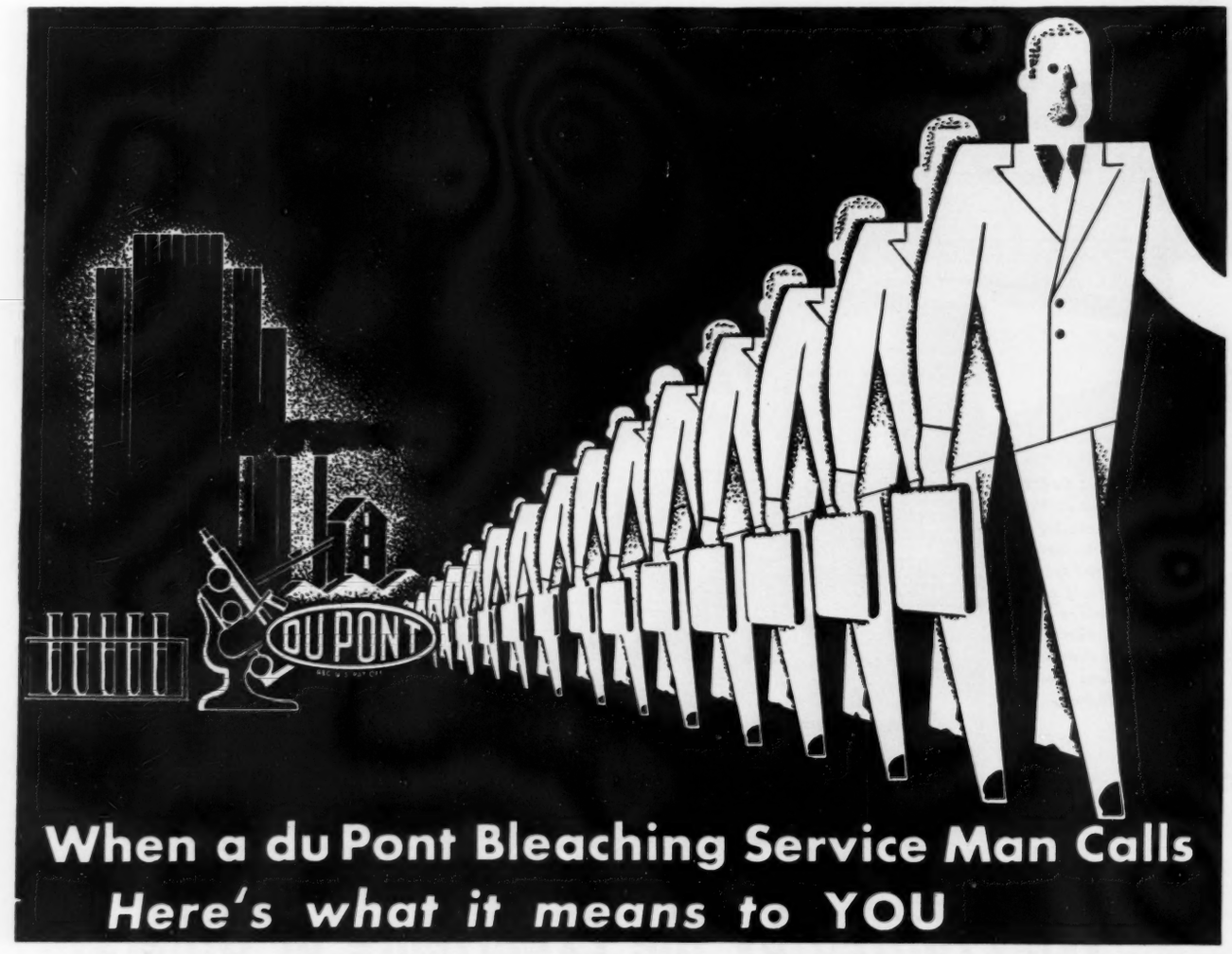
See our catalog data in Sweet's, Sec. 11/78. Write for photographic folder on Hard Maple Flooring and leaflet on heavy-duty finishes for old or new floors.

MAPLE FLOORING MANUFACTURERS ASSOCIATION
1794 McCormick Building, Chicago, Ill.

Floor *with* MFMA Maple

REG. U. S. PAT. OFF.

(NORTHERN HARD)



When a du Pont Bleaching Service Man Calls

Here's what it means to YOU

DU PONT
REG. U. S. PAT. OFF.

PEROXIDES
ALBONE*
Du Pont Hydrogen Peroxide
100 vol. Electrolytic
DFF† SOLOZONE*
(Du Pont Sodium Peroxide,
dustless and free flowing)
SODIUM
PERBORATE
*Reg. U. S. Pat. Off.
†Trade Mark

HE COMES as a counselor and friend—a man who can be of assistance in the selection of the right peroxides and bleaching processes.

He is familiar with bleaching problems, knows the importance of holding down production costs. He offers you the benefits of his own personal experience backed by the knowledge of a group of trained specialists—research men and engineers—who have been working with peroxides and peroxide bleaching problems for years.

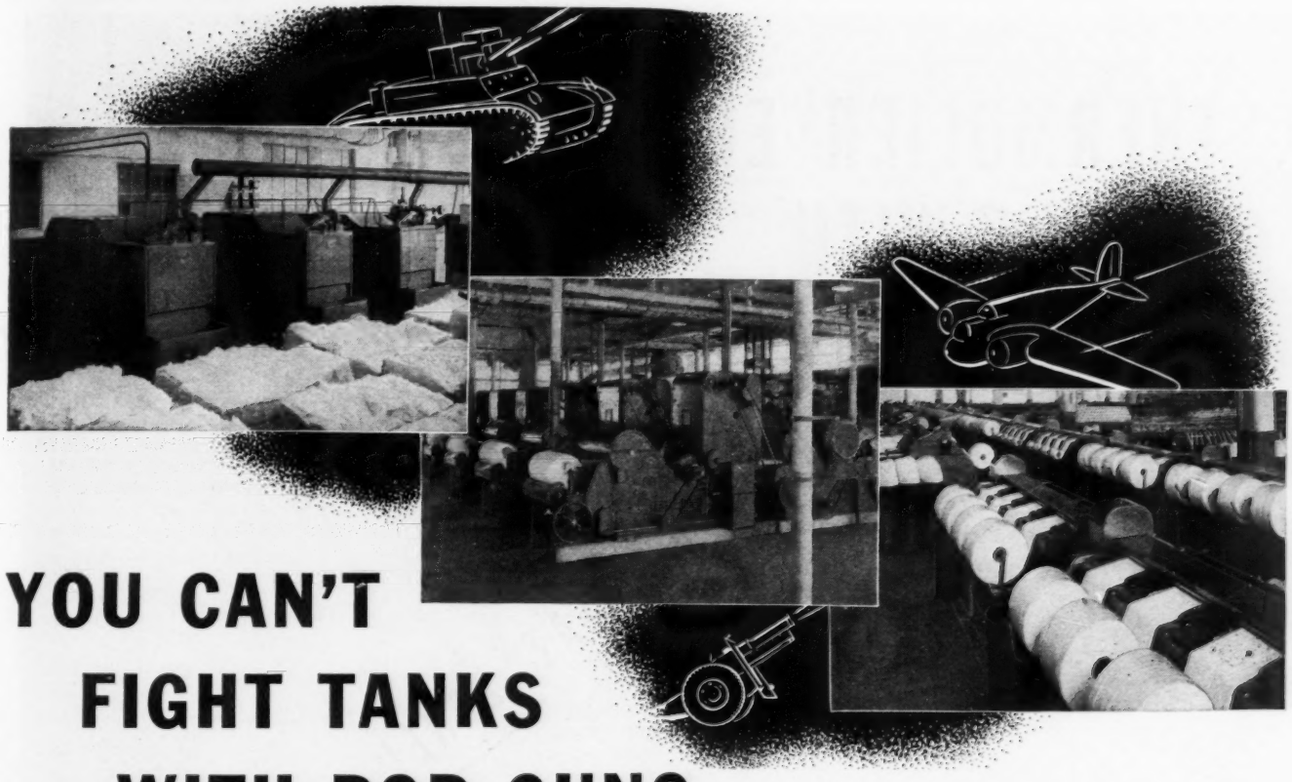
He brings into your plant up-to-the-minute facts from modern laboratory research plus the useful experience which du Pont has acquired in almost 50 years of service to the textile processing industry.

Visit the du Pont Wonder World of Chemistry Exhibits at the New York World's Fair and on the Boardwalk at Atlantic City

DU PONT
REG. U. S. PAT. OFF.

The R. & H. Chemicals Department
E. I. DU PONT DE NEMOURS & COMPANY (INC.)
Wilmington, Delaware

District Sales Offices: Baltimore, Boston, Charlotte, Chicago, Cleveland, Kansas City, Newark, New York, Philadelphia, Pittsburgh, San Francisco



YOU CAN'T FIGHT TANKS WITH POP GUNS . . .

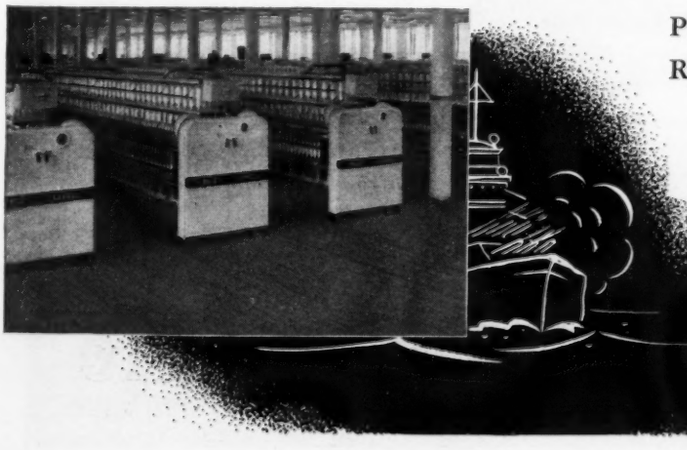
. . . or meet *M-DAY requirements with old and inefficient machinery.

The textile industry is a vital unit in the National Defense Program. Fabrics in tremendous quantities will be required for the armed forces, and these fabrics must be manufactured, not according to the standards of individual mills, but according to army and navy requirements.

Quality, strength, durability and uniformity are essentials which must be constantly maintained. Mills equipped with Saco-Lowell controlled draft units in Drawing, Roving and Spinning will be in "fighting trim" to meet these requirements . . . maintain these standards . . . and fill their quota within reasonable cost.

Prepare your equipment for National Defense Requirements. ***M-DAY will be too late!**

*Mobilization Day



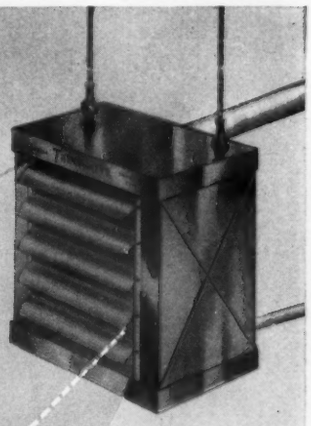
SACO-LOWELL SHOPS

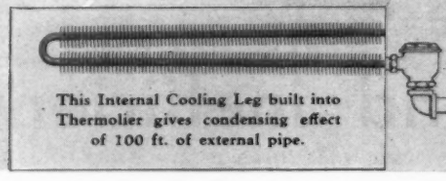
60 BATTERYMARCH ST. · BOSTON, MASS.

Charlotte, N. C. Greenville, S. C. Atlanta, Ga.

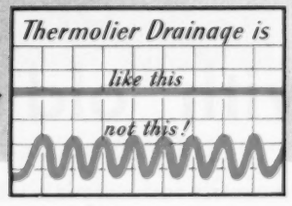
THERMOLIER EFFICIENCY *BEGINS* WITH...

THIS ADDED "FULL HEAT" ZONE!





This Internal Cooling Leg built into Thermolier gives condensing effect of 100 ft. of external pipe.



Cuts cost of installation, operation, maintenance

Here is a unit heater so efficiently designed that it has required no changes since its original development! In 12 years of service, Thermolier has shown exceptional economies due to its superior features.

For example, the exclusive Grinnell Internal Cooling Leg provides *continuous* drainage of condensate . . . prevents intermittent filling of lower sections . . . insures constant, live-steam heat in lower, as well as upper, surfaces. It contributes to Thermolier's high fuel-saving (up to 27%) . . . permits use of low-cost traps . . . and eliminates depreciation caused by intermittent drainage cycles.

Many other Thermolier features also promote overall economy. Special "condenser-type" tube-to-header construction prevents loosening of joints. U-tube heating elements automatically eliminate expansion strains and wear. Simplified pipe-connections and hangers cut installation costs. And pressure-testing of every unit insures tight assemblies for minimum maintenance.

Write for Thermolier Data Book describing 14 superior Thermolier features that cut installation, operating and maintenance costs in heating systems. Grinnell Co., Inc., Executive Offices, Providence, Rhode Island . . . Branch offices in principal cities of the United States and Canada.

GRINNELL THERMOLIER

THE UNIT HEATER WITH 14 POINTS OF SUPERIORITY

THIS IS NO. 23 OF A SERIES ON

GETTING THE MOST FROM WINDING

Information about winding designed to show improvements in winding equipment and new ideas in the winding operation

RECOMMENDATIONS FOR SLUB CATCHER SETTINGS

Our attention has recently been called to the formula for determining yarn diameter now being used by United States Testing Company and the American Society of Testing Materials. On the basis of new information, we now recommend that the formula for cotton yarn published in our Bulletin 118 (page 19) be replaced by the following:

$$\frac{1}{.90 \times \sqrt{840 \times \text{count}}} = \text{Yarn Diameter}$$

Or, in simpler form:

$$\frac{.0383}{\sqrt{\text{count}}} = \text{Cotton Yarn Diameter}$$

From this formula, we get the following:

Cotton Count	*Yarn Diameter*
10	.012″
15	.010″
20	.0085″
25	.0075″
30	.007″
40	.006″
50	.0055″
60	.005″

These yarn diameters are used as a guide for setting slub catchers. When using the Blade Slub Catcher on the Roto-Coner,* the setting for carded yarn should be about twice the yarn diameter, and for combed yarn, about one and one-half times the yarn diameter. When using the MacColl (needle-type) Slub Catcher, the opening should be twice as great as the blade setting.

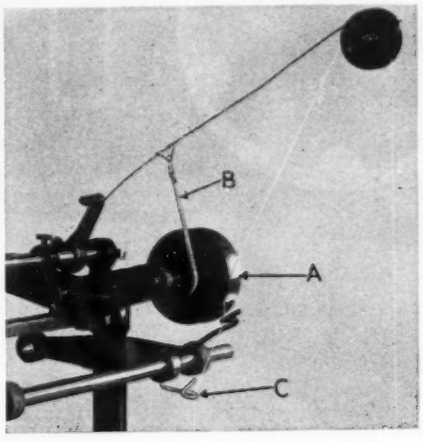
When using both Blade and MacColl Slub Catchers on the same bracket, many mills maintain a fixed difference between the two settings which applies for a wide range of yarn counts. For example, if the fixed difference between the Blade and the MacColl were .005″ and the Blade were set at .014″, then the MacColl would be set at .019″.

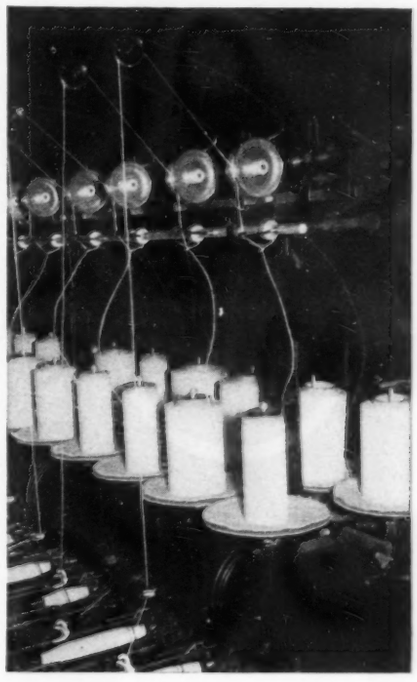
This fixed difference varies, from mill to mill, depending on the type of work and the character of the slubs removed. If there were too many slubs caught by the MacColl guide with a setting of .019″ and the blade setting was satisfactory, the fixed difference between the two settings might be increased to .007″, in which case the needle setting would be .021″.

It is impossible to make a definite recommendation for slub catcher settings because of the several types of slub catcher, various winding speeds and changing requirements for quality. The best setting can be determined by mounting slubs on a blackboard for examination. If only large slubs appear, the setting should be closed; if there are many slubs on the board, the setting can be opened to reduce the number of breaks, making it unnecessary to replace small imperfections with knots.

CREPE TENSION FOR OVEREND DELIVERY FROM LARGE PACKAGES (No. 90 Winder)

Careful mill tests of the new Crepe Tension for the No. 90 Winder have convinced weavers of crepe fabric that they can now enjoy the many advantages connected with large supply packages.





Overend delivery from packages up to two pounds which cannot be successfully unrolled means: less changing of spools; easier starting at high speeds with less end breakage; a steadier, more uniform tension; freedom from strained yarn and consequently better quills.

This Crepe Tension incorporates two discs (A) firmly pressed together and forming a V slot in which the yarn is threaded and allowed to find its own diameter. The band (B) is attached to the Compensator arm and acts as a brake on the discs to control the amount of tension. The yarn, threaded around the discs, causes them to turn, and there is no opportunity to chafe the yarn or distort the twist. Yet no kink can go through.

The pigtail (C) is movable so that it can be centered independently over the supply package while the compensator wheel is centered directly over the winding package.

"THERE'S A UNIVERSAL WINDER FOR EVERY TEXTILE NEED"

UNIVERSAL WINDING COMPANY

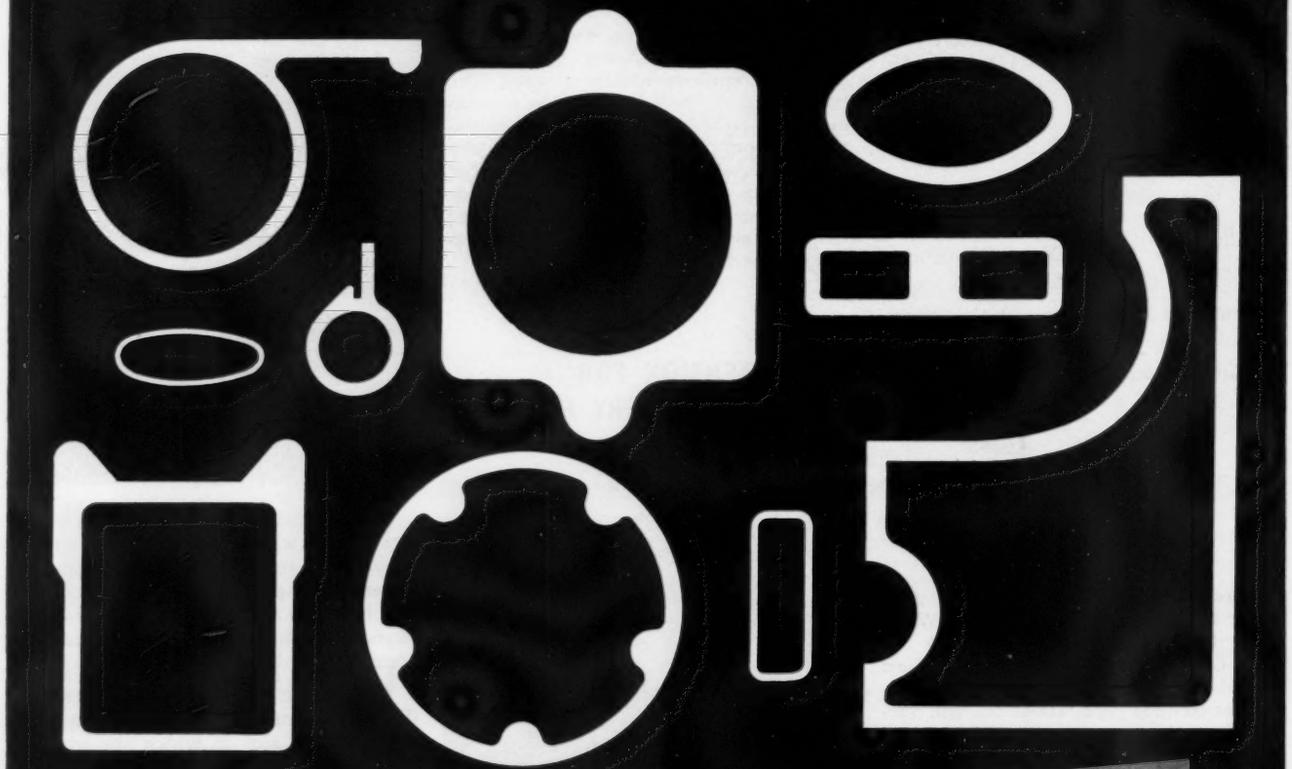
PROVIDENCE BOSTON PHILADELPHIA UTICA CHARLOTTE ATLANTA

*Reg. U. S. Pat. Off.

MAZLO
Reg. U.S. Pat. Off.

MAGNESIUM ALLOYS

THE LAST WORD IN LIGHTNESS



You can do things with MAZLO HOLLOW EXTRUSIONS

MAZLO hollow extrusions offer great possibilities to the designer. He can get the ultimate in lightness, while keeping a high degree of strength and sturdiness. Metal is placed exactly where it's needed; no wasteful excess.

MAZLO hollow extrusions greatly reduce manufacturing costs. Made to match the desired form quite closely, very little finishing is required. Contours not possible by other methods of manufacture are produced without expensive machining, fitting and assembly operations.

Textile machinery builders are employing hollow extrusions for parts that reciprocate at high speeds, in stop-and-go motions, and for products that must be carried about. The weight thus saved results in smoother, higher speed operation and reduced costs. May we show you how MAZLO Magnesium Alloys will help you? *Sales Agent:* Aluminum Company of America, 1704 Gulf Building, Pittsburgh, Pennsylvania.

MAZLO

AMERICAN MAGNESIUM CORPORATION

AMERICANS

MUST STAND TOGETHER

THESE are troublous times. All classes, all creeds, rich and poor, must stand together if America is to weather the storm.

NOW as never before is complete harmony and cooperation between employee and employer essential.

A PLAN FOR SOUTHERN INDUSTRY

One of America's greatest industrial relations specialists has prepared a comprehensive new program to enable you to bring your workers to a clearer understanding of industry's problems.

Especially prepared for the Southern textiles, it lays a common sense foundation for better employee-employer relations for years to come.

ESTABLISHED 1904

FOR DETAILS ADDRESS

THE STEVENS-DAVIS COMPANY

1234 WEST JACKSON BOULEVARD, CHICAGO, ILL...

WE'RE IN THE ARMY NOW..

JACQUES WOLF DYES MEET GOVERNMENT REQUIREMENTS FOR SERVICE FABRICS

ARMY uniforms have to be able to "take it"—in all kinds of weather. Be sure *your* service fabrics can stand their color tests. Use these Jacques Wolf Alizarine yellows. They meet all U. S. Government specifications for fastness to light, salt water, fulling and carbonizing.

ALIZARINE YELLOW R gives deep (chrome-orange) yellow.

ALIZARINE YELLOW GN gives bright (lemon) yellow.

Also used in Printing, for colors of extreme smoothness and depth of shade.

Alizarine yellows are already famous among the list of well-known Jacques Wolf specialties. Write for further information on their characteristics and use. Our complete research laboratory is at your disposal.

FOR MORDANTING

Use Jacques Wolf ACETATE OF CHROME to give fibres *extra affinity* for dyestuffs.

WOLF BRAND PRODUCTS

JACQUES WOLF & CO.

Chemicals PASSAIC, N. J.

WAREHOUSES: Providence, R. I., Philadelphia, Pa., Utica, N. Y., Chicago, Ill., Greenville, S. C., Chattanooga, Tenn.
Midwestern Distributor: Bradley F. Marthens, Milwaukee, Wisc.

It took much more than skilled labor, modern equipment and finest quality materials to make Dayco Tempered Roll Coverings the new standard of the industry. It took Dayton's 25 years' experience in technical research development, testing and production—it took more than a year's extensive use in leading textile mills, *and it took the cooperation of mill superintendents and technicians.* So here's orchids and a great big bow to the textile mill executives who helped make Dayco Roll Coverings the one standard of year-round efficiency by which all others must be judged.

These all-season Dayco Roll Coverings take temperature changes or extremes in stride without flattening—distortion or grooving. There are no ends down jitters and no production loss with Daycos. Daycos' unvarying properties assure instantaneous start-up and production after winter week-end shut-downs. Day in and day out, the overwhelming advantages of the all-season Daycos keep your efficiency up and your costs down.

THE DAYTON RUBBER MFG. CO.
TEXTILE PRODUCTS DIVISION. Dayton, Ohio
The Originators and Pioneers of Dayco Tempered Roll Coverings

GREENVILLE SALES OFFICE
Woodside Building, Greenville, S. C.

ONLY DAYCOS HAVE THESE 11 OVERWHELMING ADVANTAGES

1. Improved drafting.
2. No grooving—less ends down.
3. Not affected by temperature changes.
4. Lower net roll costs.
5. Long service life.
6. Easy to apply.
7. Proper cushioning.
8. Unaffected by hard ends.
9. Static free.
10. Oil resisting.
11. One piece tubular construction.

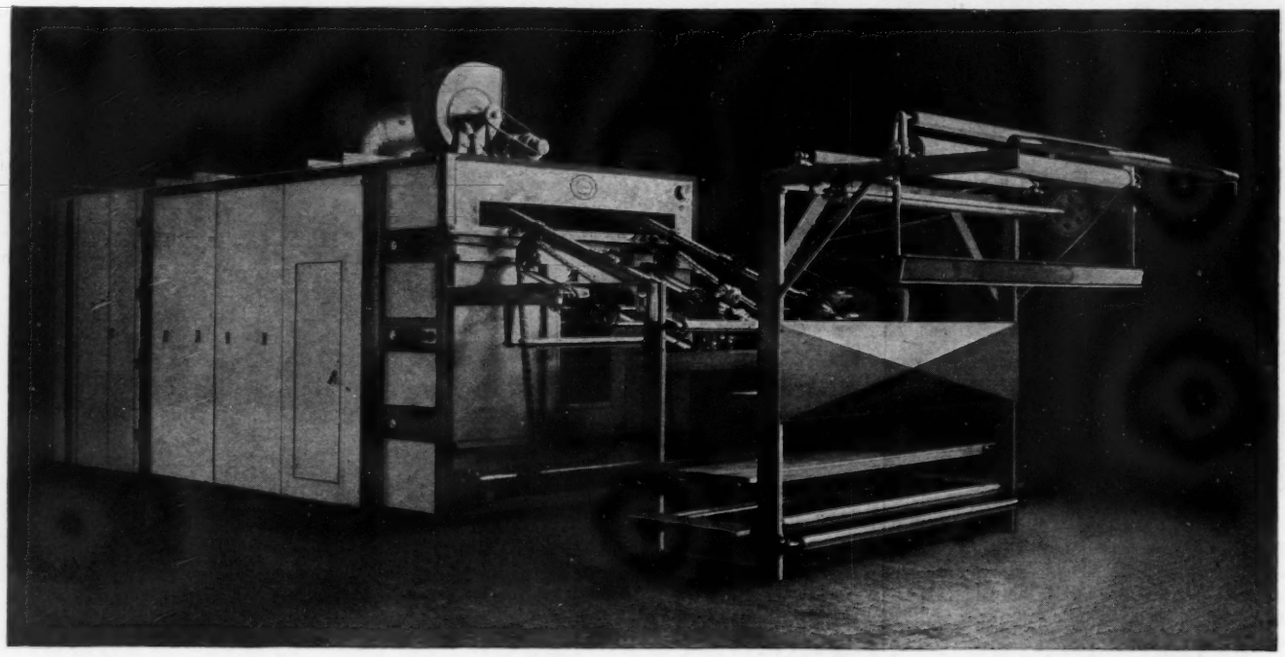
Dayton
***Thorobred* TEXTILE PRODUCTS**
Dayco TEMPERED ROLL COVERINGS—LOOM SUPPLIES
Made by the World's Largest Manufacturer of V-Belts

COPYRIGHT 1940, THE DAYTON RUBBER MFG. CO.

NOW—A New Standard of Tenter Performance that means New Profits *for you!*

JAMES HUNTER MACHINE CO. Hunter NORTH ADAMS MASS.

New Hunter Uni-Flow Tenter Affords Cloth Speeds on 16 Ounce up to 38 Yards per Minute in 12 Linear Feet for the Drying Chamber



Hunter announces the new Uni-Flow return bend tenter—the latest addition to the long Hunter record of achievement in cloth drying—a record unequalled by any other tenter manufacturer.

Developed in the closing months of 1939 after months of testing, the new Hunter Uni-Flow is setting production records unlikely to be challenged. The Uni-Flow Tenter, for example:

(a) Tenters 16 oz. woolens or worsteds at 38 yards per minute in 12 linear feet of floor space for the drying chamber with less than 12 HP.

(b) Guarantees most efficient known use of heat and air.

(c) Affords one man operation at highest speeds with completely automatic safety features.

(d) Will dry three times as much cloth as most old tenters in one-third the floor space.

(e) Comes complete with all motors, starters, limit switches, automatic guiders, selvage openers, lint screens, automatic temperature and speed controls . . . the user need only wire motors and bring steam lines to the machine.

For complete details on this radically different Uni-Flow Tenter and actual production records on wide varieties of cloth write

JAMES HUNTER MACHINE COMPANY

FOUNDED 1847 **NORTH ADAMS, MASSACHUSETTS**

Southern Agent: CAROLINA SPECIALTY CO., Charlotte, N. C.
Western Representative: E. G. PAULES, 343 Bendix Bldg., 1206 Maple St., Los Angeles, Cal.

SO you think you might be cramped for space in a rush-hour subway car? Well, maybe, but compared to the fit of a modern bearing, you've got more than plenty of room.

.002 of an inch clearance is all the bearings get in many of today's precision machines. And that's enough for cool comfort . . . as long as the lubrication is right.

Just a thin film of oil does the trick. But if that film fails . . . look out! It's got to be there *all the time,* at slow speeds, at high speeds, and particularly when there's a sudden increase in load.

Here at Shell we've studied oil for years. And we've spent a great deal of time and money developing lubricants that stay on the job and maintain that vital oil film.

Many of these lubricants have made machines run better, smoother, more dependably . . . in plants just like yours. If you're operating some bearings that need more attention more often than they should, the chances are your Shell lubrication man has the answer.

SHELL

SHELL *Industrial* LUBRICANTS

More Money for you

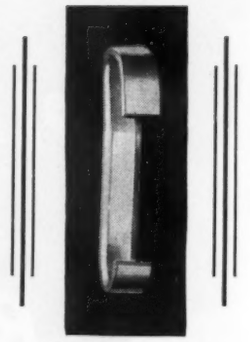
in BOWEN *Patented* BEVEL EDGE U. S. RING TRAVELERS

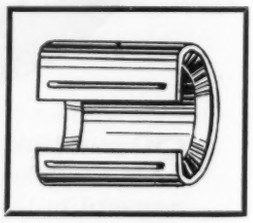
Universal Standard Ring Travelers are sold under the trade names:

- Bowen Round Point Travelers
- Bowen Square Point Travelers
- Bowen Improved Vertical Bronze
- Bowen Patented Bevel Edge
- Bowen Patented Ne-Bow Vertical
- Bowen Patented Vertical Offset
- Bowen Flat Oval and Round Wire Travelers

Sealed metal shipping container protects you by insuring that U. S. products reach you in perfect condition.

When you produce ideally smooth, even yarn—at lowest cost, you save money through superior ring travelers, and make money through efficient spinning room production. You get BOTH with Bowen Patented Bevel Edge U. S. Ring Travelers. The edge enables the swirling of the end, in passing through the traveler, to produce perfect yarn. There are no angular edges to flatten the end, split ends and fly wastes are eliminated. Spinning and twister ring travelers are stocked for every purpose. More and more experienced textile men are now saying, "I've changed to the Bowen Patented Bevel Edge."





Bowen Pat'd BEVEL EDGE TRAVELER

U. S. RING TRAVELER COMPANY

PROVIDENCE, R. I. GREENVILLE, S. C.

AMOS M. BOWEN, Pres. and Treas.

REPRESENTATIVES:

WILLIAM P. VAUGHAN . . P. O. Box 792, Greenville, S. C.
WILLIAM H. ROSE . . . . . P. O. Box 792, Greenville, S. C.
TORRENCE L. MAYNARD . . P. O. Box 456, Belmont, N. C.
OLIVER B. LAND . . . . . P. O. Box 158, Athens, Georgia

UNIVERSAL STANDARD RING TRAVELERS

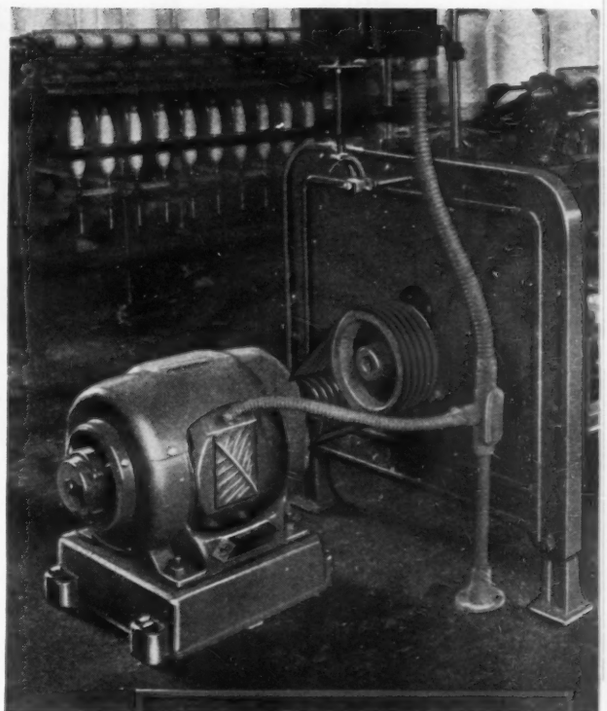
U.S. RING TRAVELER CO.

"A Traveler for Every Fibre"

BOWEN PATENTS

STOP TEXTILE DRIVE TROUBLES WITH TEXROPE!

Why Continue to Use Out-of-Date Transmission Equipment? Let Texrope Drives Help You Cut Power Costs... Increase Mill Efficiency... Beat Broken Yarn Hazards . . . Reduce Shutdowns!



TEXROPE DRIVES DON'T SLIP or jerk... don't snap threads... cost less to maintain... reduce yarn breakage... cut power bills. In this textile mill, drive troubles are virtually eliminated by using Allis-Chalmers Texrope Drives and Quick-Clean Motors.

So well established have Texrope V-belt Drives become in the textile industry that it's hardly a question of IF but of HOW SOON you will switch to the big savings and better performance they can bring you!

Ever since Allis-Chalmers developed Texrope Drives 14 years ago expressly for textile mill needs, these high efficiency drives have been sweeping away all opposition. They have proved themselves . . . in the field, under all conditions.

And no wonder—for Texrope Drives do not slip or jerk . . . do not break fragile yarns on the frames . . . eliminate spattering of oil on goods . . . keep production and maintenance costs to a minimum. These are important factors to you as a mill operator or owner . . . factors that will help you STOP TEXTILE DRIVE TROUBLES!

New Compound Gives Longer Life

That's why you should find out about Texrope Drives . . . how these modern transmission belts are made of a new, special, cool-running rubber compound to give you longer life . . . made with "wedge" construction for greater efficiency (up to 98.9%) . . . exactly matched into sets for sharing the load together and even wearing.

Get in touch with the trained engineer in the district office near you. He has interesting facts to tell you . . . that will help you cut costs. Call him today. Or write direct to Allis-Chalmers. A-1179

Over 90 Years of Engineering Superiority Work for You When You Specify Allis-Chalmers!

Belts by Goodrich

ALLIS-CHALMERS

MILWAUKEE · WISCONSIN

BENJAMIN RLM DOME REFLECTOR

• Made to RLM specifications, this porcelain enamel reflector is one of the most widely used lighting units in industry. Provides wide, even distribution of light characterized by good diffusion and soft shadows. Available with Turnlox hoods which reduce maintenance cost and facilitate easy cleaning by the user.

GOOD OVERHEAD GENERAL LIGHTING FOR MOST FACTORY PRODUCTION AREAS PROVIDED BY BENJAMIN RLM DOME REFLECTORS. NOTE EVENNESS OF ILLUMINATION

"SEALED-FLO" FLUORESCENT UNIT

• Rated vapor-proof by Underwriters' Laboratories, this Benjamin "Sealed-Flo" embodies the characteristics of the Benjamin Streamliter design and, in addition, has a one-piece housing sealed with gasket equipped glass cover. The Cover is available in clear, opal or impact-resistant glass. Furnished in either two or three lamp units for both general and localized illumination of industrial and commercial interiors.

ILLUSTRATING THE SOFT, GLARELESS QUALITY OF BENJAMIN STREAMLITER FLUORESCENT LIGHTING IN LOCATIONS WHERE SEVERE SEEING TASKS ARE PERFORMED

STEELITE ARMOR-CLAD UNIT

• With steel housing above, and heat, cold and impact-resistant plate glass below, Steelite is ideal for heavy industry's severest service. Choice of concentrating, medium and wide-spread Alzak aluminum reflectors.

UNIFORM LIGHTING OF STOCK ROOMS WITH BENJAMIN STOCK-BIN-LITE

STOCK-BIN-LITE REFLECTOR

• Unique reflector design provides uniform light for stock bins, tool cribs, warehouses, etc. Deflector directs light upward above cutoff. Openings in ends build up illumination between units.

↑ LIGHTING HIGH BAY AREAS WITH UNITS SUCH AS BENJAMIN STEELITE

FLUR-O-LITER ALZAK ALUMINUM FLUORESCENT UNITS

● Available for two or three 48-inch, 40-watt lamps, the Flur-O-Liters are designed for local illumination over machines and benches or high mounting general lighting of entire rooms. Individual polished Alzak aluminum reflectors adequately shield lamps. Equipped with renewable lamp starters and high power factor auxiliaries which reduce flicker. Bears Underwriters' approval label.

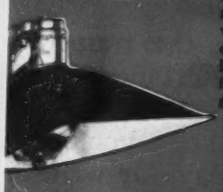
"ALZO-LITE" FLOODLIGHT . . .

Has a unique hinged glass cover which protects reflector surface from rain, mist, fog, dust and smoke.

HOW TO LIGHT YARDS AND OUTSIDE AREAS TO PREVENT SABOTAGE AND PROVIDE "DAYTIME" WORKING CONDITIONS FOR THE EXTRA SHIFTS ↓

WARRANTY OF PERFORMANCE AND CONSTRUCTION

● All Benjamin Fluorescent units are designed to give the highest light output efficiency and are warranted by Benjamin to comply with all recognized safety requirements, electrical, illumination and mechanical standards. They are certified to meet with the requirements of the Underwriters' Laboratories as evidenced by the UL inspection label affixed to each unit.



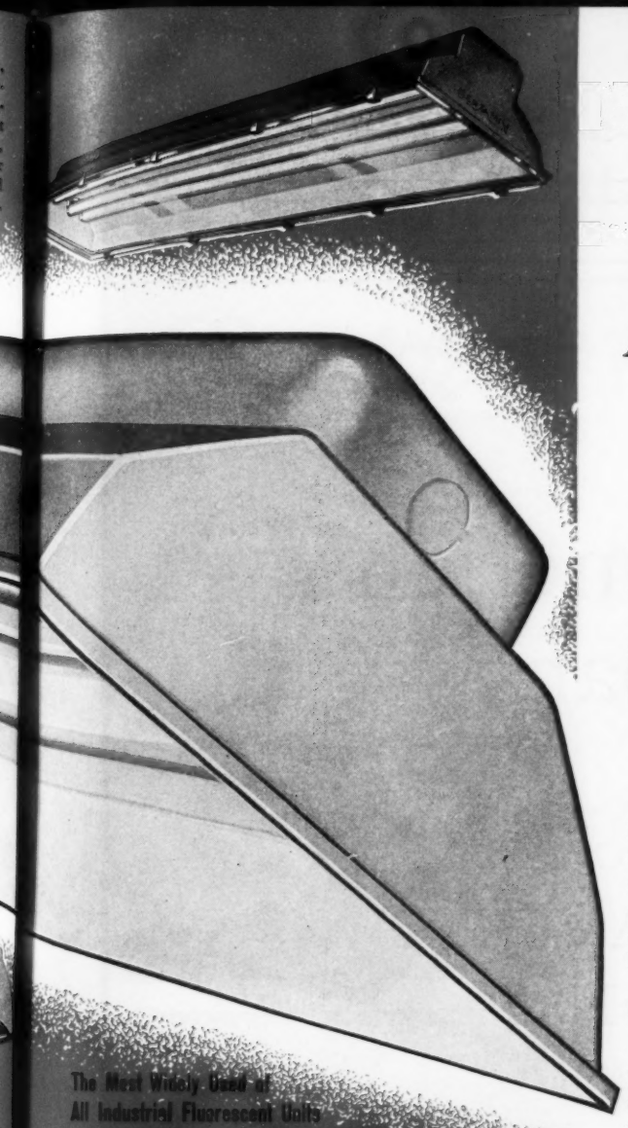
"DUO-SERVICE" FLOODLIGHT . . .

Combines porcelain enamel and Alzak aluminum reflectors for wide-spread ground coverage and spot-lighting certain areas for protection of yards, grounds and buildings.

TO GUARD AGAINST SABOTAGE, USE BENJAMIN FLOODLIGHTING . . . BUILD A PROTECTIVE FENCE OF LIGHT AROUND YOUR PLANT

● Whenever it is desirable or necessary to guard against the activities of saboteurs, prowlers and others attempting unauthorized entry or bent upon destruction, floodlighting plant yards, passageways and approaches is recommended as a protective measure. Moreover, such floodlighting protects against accidents outdoors at night and is successfully used for the improvement of public relations.

● Benjamin floodlights and other outdoor lighting units are designed to supply the proper amount and kind of light for the requirements of various locations and applications. Two of the many different types and sizes of Benjamin floodlights are shown to the right. Mail Coupon for complete information.



The Most Widely Used of All Industrial Fluorescent Units

THE BENJAMIN RLM STREAM-LITER

● Made of Benjamin Lifetime porcelain enamel, the Streamliter is designed for general illumination with 48", 40-watt lamps and features 78% light output efficiency, 72½ degree cutoff angle and closed end lamp shielding. Equipped with renewable lamp starters and high power factor auxiliaries which minimize flicker. Made in accordance with RLM Standard Specifications and carries the RLM Label.

AVAILABLE SOON! NEW BENJAMIN UNIT FOR NEW 60" FLUORESCENT LAMPS

● A new Fluorescent unit designed and constructed to high Benjamin standards for use with the new 60" Fluorescent lamp. This unit provides especially high levels of Fluorescent Lighting for general or localized illumination of factory interiors.

TAKE THIS IMPORTANT STEP NOW TO

MAKE SURE YOUR MILL AND OFFICE LIGHTING MEASURES UP

TO INCREASED PRODUCTION DEMANDS

SEND TODAY for Complete Data on How to Provide Uniform Seeing Efficiency for All Employees, At All Times, In Every Department of Mill and Office.

● Shown here are some of the many Benjamin Lighting Units which can be used in preparing your mill and office lighting to meet the increased production demands resulting directly or indirectly from the National Defense Program.

WHY MODERNIZED LIGHTING PAYS

● When these Benjamin units are properly fitted to both the Seeing and Physical requirements of your various locations and operations, the time now being wasted in trying to see under inadequate light can be saved to increase the *quantity and maintain or improve the quality of production!* An increase in illumination from one foot candle to twenty triples the speed of seeing!

● With Fall and Winter will come dark days, and the possibilities of extra shifts—it is important, therefore, that you make sure now that your mill and office lighting is ready to meet every exigency, so that increased production can be maintained without affecting the uniformity of product quality, employee fatigue minimized and morale improved.

● First step is to request copies of the new Benjamin Bulletins on the types of lighting in which you are particularly interested . . . Plant Lighting, Office Lighting, Fluorescent Lighting, Protective Floodlighting. These Bulletins will give you much valuable data for use in checking your present lighting system or planning lighting for new buildings. It gives you the answers to many important questions such as how to select the proper lighting units . . . when and where to use Fluorescent Lighting and the importance of observing the fundamental principles of illumination.

HOW TO GET FREE DATA BULLETINS

● You may secure copies of these Data Bulletins from your Electrical Wholesaler, your local Electrical Contractor, the Benjamin Field and Engineering Organization, or to make sure you will receive the Data Bulletins immediately, mail the coupon below or address a letter to the Benjamin Electric Mfg. Co., Des Plaines, Illinois.

BENJAMIN TRADE MARK

LIGHTING EQUIPMENT

Distributed Exclusively Through Electrical Wholesalers

BENJAMIN ELECTRIC MFG. CO.
Department G
Des Plaines, Illinois

Gentlemen: Please Send Me Data Bulletins on ☐ Plant Lighting ☐ Office Lighting ☐ Fluorescen Lighting ☐ Protective Floodlighting.

Name .....

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L. F. Dommerich & Company

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For Manufacturers and Merchants

Inquiries as to our services solicited

●

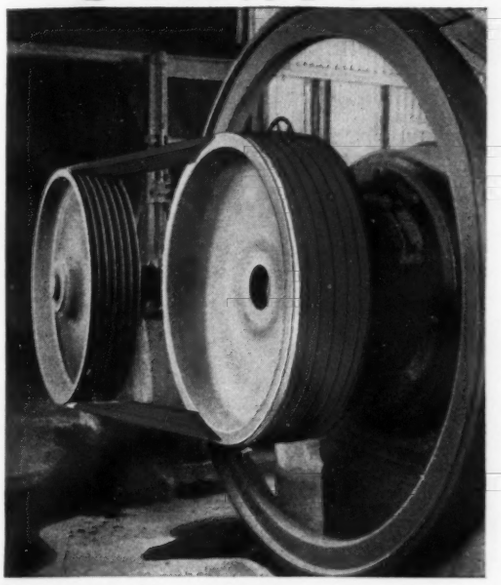
ESTABLISHED 1840

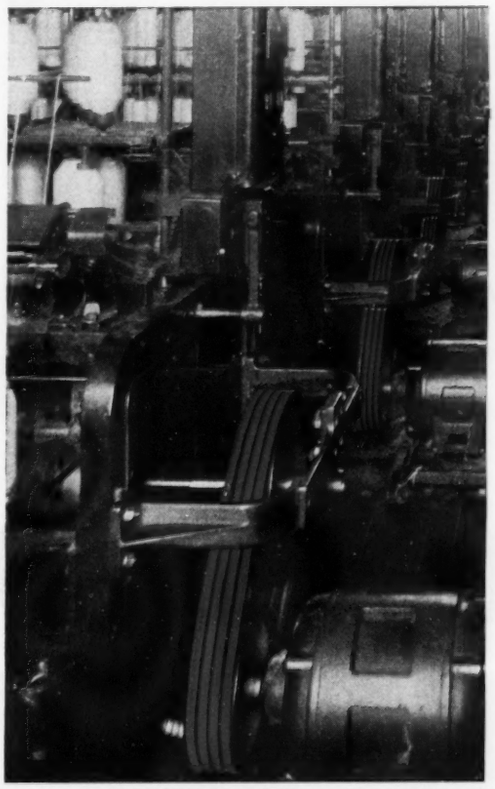
You Couldn't Have 8 Better Reasons

to use

Condor WHIPCORD V-BELTS

than these 8 Points of Balance . . .





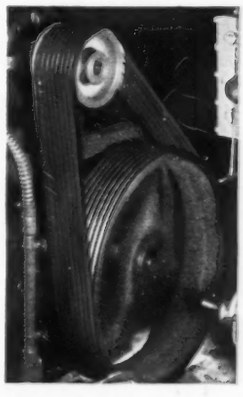
1. **Wide margin of strength**—to take care of starting, peak or shock loads—obtained through endless "Whipcord" construction.
2. **Low ultimate stretch.** We know of no other construction which approaches Condor's extreme lack of stretch. That accounts for their long life in service.
3. **Uniform Flexibility**—to withstand constant flexing over pulleys.
4. **Maximum resistance** to structural breakdown and weather conditions—the natural result of the Condor design, construction and vulcanizing; destructive internal heat dissipated.
5. **Smooth running.** Condor V-Belts are vulcanized in steel molds to insure exact and uniform cross sections and unvarying lengths.
6. **Maximum traction**—due to accurate shaping, friction finish and lateral compressibility under the wedging effect of the grooves.
7. **High resistance to side wear**—due to special close woven but flexible cover fabric.
8. **Correct lateral reinforcement**—to combine strength and maintenance of shape, regardless of constant and rapid flexing.

These are the points which explain the many records of long and economical service. Use Condor Whipcord V-Belts for service, saving, and satisfaction.

Condor PRODUCTS

Conveyor and Elevator Belt
Transmission Belt
V-Belt
Air Hose
Contractor Hose
Fire Hose
Hydraulic Hose
Oil and Gasoline Hose
Sand Blast Hose
Steam Hose
Suction Hose
Water Hose
Chute Lining
Launder Lining
Industrial Brake Blocks and Lining
Molded Rubber Goods
Rubber Lined Tanks
Rubber Covered Rolls

Abrasive Wheels
Bowling Balls



THE MANHATTAN RUBBER MFG. DIVISION
OF RAYBESTOS-MANHATTAN, INC.
EXECUTIVE OFFICES AND FACTORIES
48 Townsend St., Passaic, N. J.

GARGOYLE VACTRA OILS ON DRAFT ROLLS HELP

Spare the Oil; Save the Yarn!

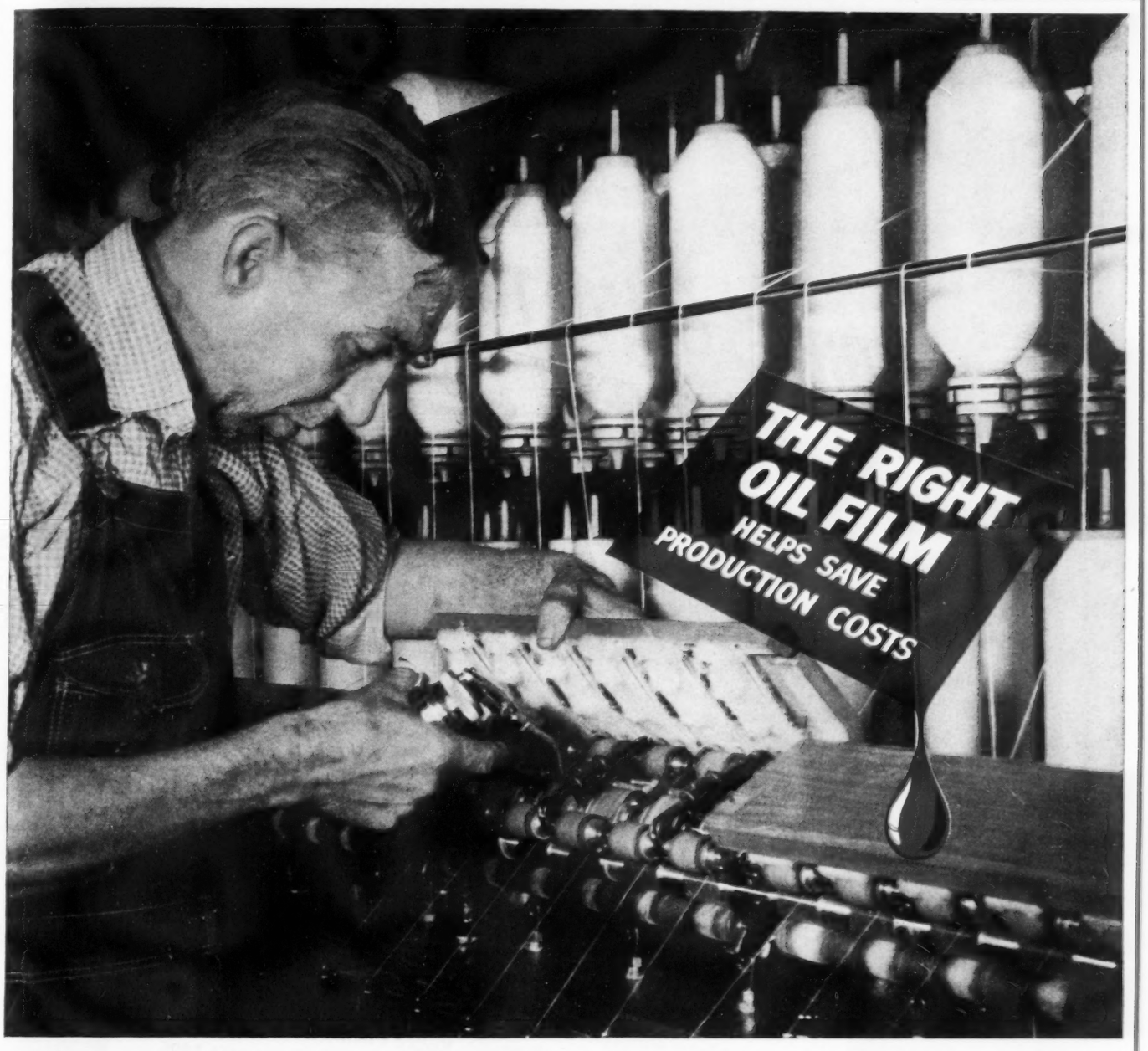
GARGOYLE VACTRA OILS help you maintain production of high-quality yarn. Their exceptional persistence of film permits small feeds on draft roll bearings. This reduces losses due to staining . . . minimizes friction and costly wear...helps you save money on maintenance and power consumption.

CALL IN Socony-Vacuum for

You'll Profit from these "Exclusives"

☞ **SKILLED LUBRICATION COUNSEL** of a Socony-Vacuum man backed by 74 years' experience . . . the greatest in the Petroleum Industry.

☞ **A COMPLETE LINE** of Lubricants . . . the scientifically correct lubricant for every type of machine you now own . . . or will buy.



Correct Lubrication

☞ **NEW LUBRICANTS** ahead of new needs . . . developed in close cooperation with machine builders by famous Socony-Vacuum laboratories.

☞ **HALF A MILLION CASE HISTORIES** to guide our engineers in recommending the right use of these lubricants to earn Lubrication Profits for you.

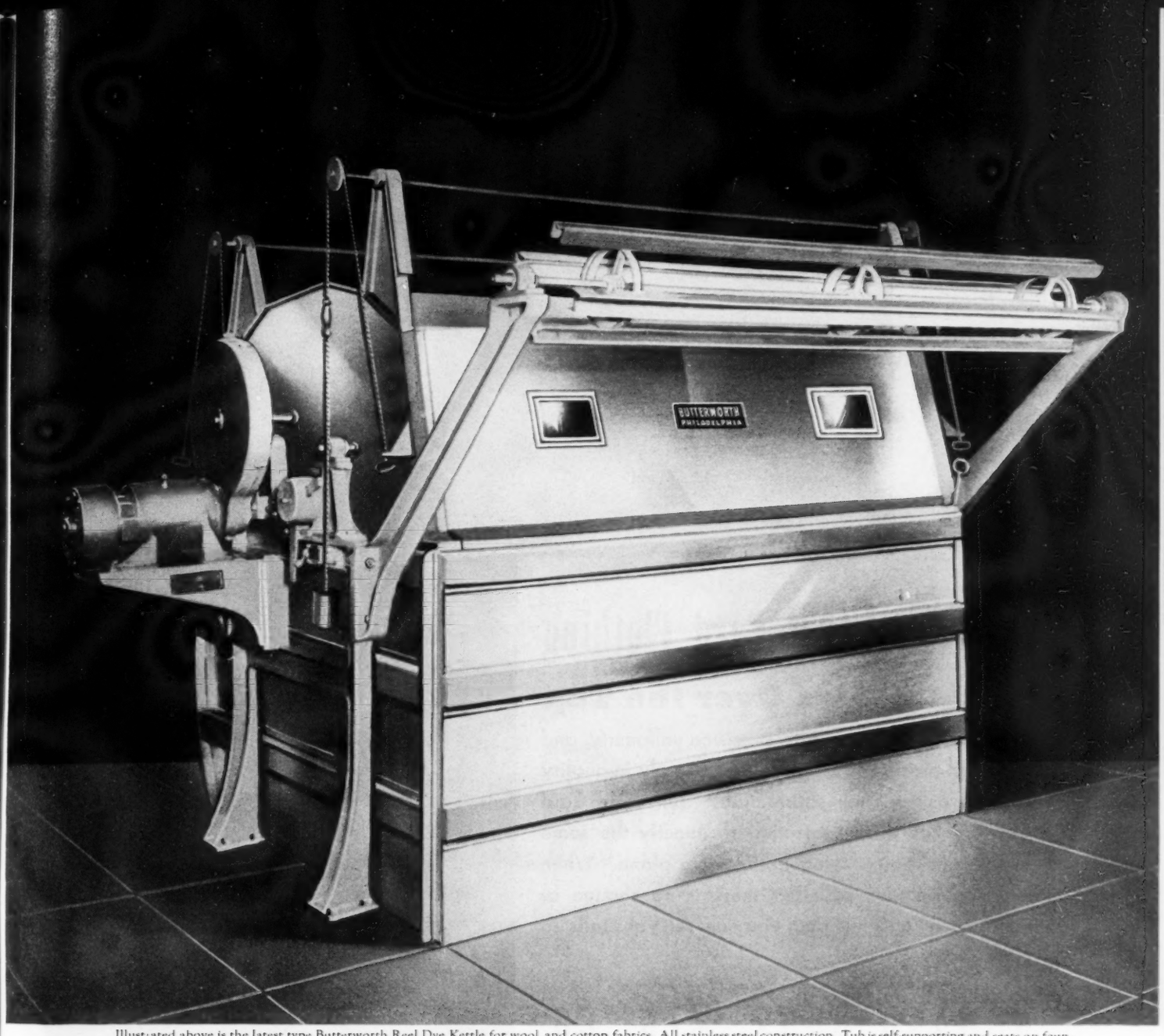
☞ **DISTRIBUTION** throughout the world of high-quality lubricants.

• • •

SOCONY-VACUUM OIL CO., INC.
Standard Oil of New York Division • White Star Division • Lubrite Division • Chicago Division • White Eagle Division • Wadhams Division • Magnolia Petroleum Company • General Petroleum Corporation of California

GARGOYLE
Lubricants

THERE'S OIL IN THE HEART OF EVERY LINK
MORSE ROLLER CHAIN
CHANNEL
LUBRICATED
INTERCHANGEABLE
• The Morse channel lubrication design builds a "force feed" oil system in every link. The chain's movement leads oil to the heart of the chain—the pin and bushing surfaces. Positive lubrication cuts wear, lengthens chain life.
Morse channel-lubricated roller chain is interchangeable with every other standard round-pin roller chain.
Morse construction includes: rollers, pins, and bushings of special alloy steels, case hardened; tighter pin and bushing fits in side plates; a better strength balance throughout the chain.
For longer life and smooth, efficient operation, choose Morse Roller Chains.
GET NEW ROLLER CHAIN DATA BOOK
Bulletin R54—Engineering and operating data, construction and performance specifications on Morse Roller Chain. Write today for this helpful, informative bulletin.
Photograph shows Morse Roller Chain drives on a huge wire screen weaving machine.
SILENT CHAINS ROLLER CHAINS FLEXIBLE COUPLINGS KELPO CLUTCHES
MORSE positive DRIVES
MORSE CHAIN COMPANY ITHACA N. Y. DIVISION BORG-WARNER CORP.



Illustrated above is the latest type Butterworth Reel Dye Kettle for wool and cotton fabrics. All stainless steel construction. Tub is self-supporting and seats on foundation below floor level. Drive is by fully enclosed gear reduction motor. Machine is equipped with idler reel and an unloading device with automatic stop motion.

True colors from the start . . . There is no lost production in dyeing with the new Butterworth Reel Dye Kettle. Colors are true from the start. The stainless steel construction assures a quicker rinse with no wasted time between lots . . . better production . . . bigger profits. Write for further facts.

Whether you are interested in dyeing cotton, rayon, silk, woolens or worsteds—in the skein, warp, package, piece or raw stock—there is a Butterworth Machine that will exactly meet your requirements. Butterworth features the complete line of Klauder Weldon Dyeing Machinery, including parts for machines now in use.

Butterworth

Serving the Textile Industry Since 1820

H. W. BUTTERWORTH & SONS CO., PHILADELPHIA, PENNSYLVANIA : : Est. 1820. Plants at Philadelphia and Bethayres, Penna. : : Offices at Providence, Rhode Island and Charlotte, North Carolina : : In Canada – W. J. Westaway Co., Hamilton, Ontario.

TUFFERIZED Card Clothing

U. S. PATENT NO. 2,174,173

Goes Over the Top

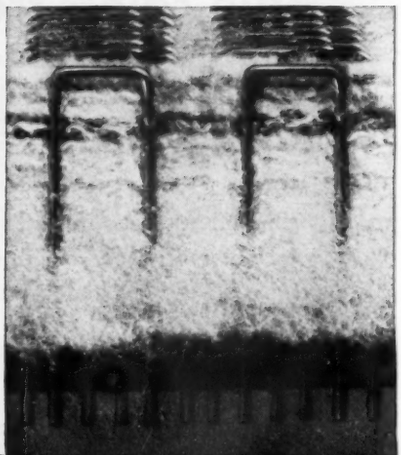
Amazing improvements, precision uniformity, and patented-process, produce new high peaks in quality as well as customer satisfaction. Tufferized Card Clothing has wires projecting to exactly the same length, and points lying in the same plane. When mounted on your cylinders there is no change or variation of position and you can set your rolls to closer limits.

Write for additional information or ask our representative

HOWARD BROS. MFG. CO.

HOME OFFICE AND FACTORY: WORCESTER, MASS.

Southern Plants: Atlanta, Ga., Gastonia, N. C. *Branch Offices:* Philadelphia, Dallas
Canadian Agents: Colwool Accessories, Ltd., Toronto 2, Canada



Microphotograph shows how Tufferized Card Clothing wires seat square, flat, and firmly into the foundation with wires parallel . . even in length . . spaced uniformly

Products: Card Clothing for Woolen, Worsted, Cotton, Asbestos, and Silk Cards — Napper Clothing, Brush Clothing, Strickles, Emery Fillets, Top Flats Recovered and extra sets loaned at all plants — Lickerins and Garnett Cylinders from 4 to 30 inches and Metallic Card Breasts Rewired at Southern Plant — Midgley Patented Hand Stripping Cards, Howard's Special Hand Stripping Cards and Inserted-Eye and Regular Wire Heddles

BENZOFORMS

DISCHARGEABLE
DYESTUFFS
FOR WASHABLE
FABRICS AND
PRINT GROUNDS

BENZOFORMS

are a complete color range of dyestuffs for after-treatment with formaldehyde. They are dischargeable and have better than average fastness to washing. Benzoforms are suitable for the dyeing of rayon and cotton in all stages of manufacture and in all types of machines. The method of application is simple and inexpensive. For quality and economy use BENZOFORMS.

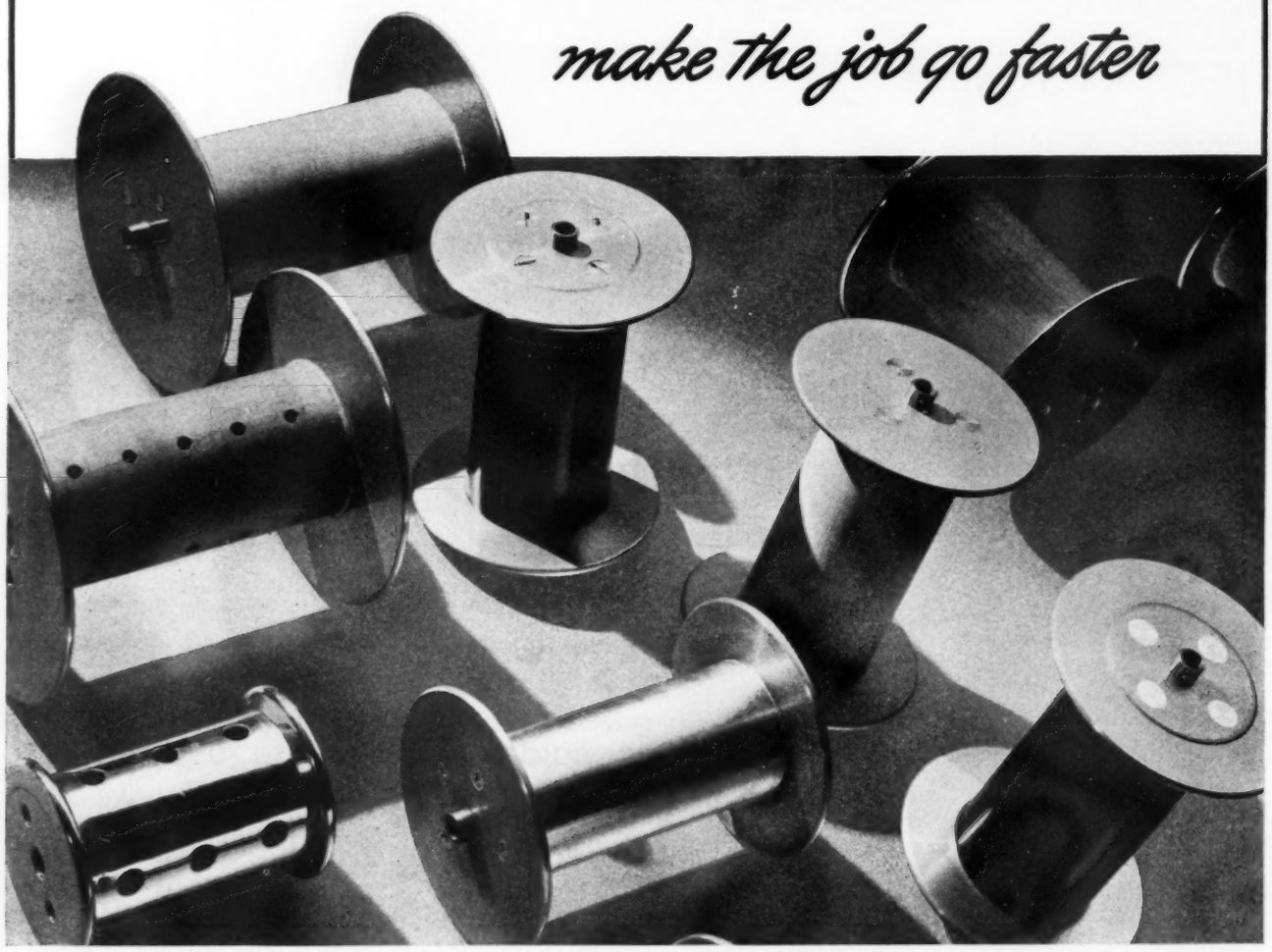
GENERAL DYESTUFF CORPORATION

FOUR THIRTY-FIVE HUDSON STREET • NEW YORK CITY

BOSTON • PROVIDENCE • PHILADELPHIA • CHICAGO • CHARLOTTE • SAN FRANCISCO

BOBBINS WITH **ALUMINUM** HEADS

make the job go faster



Light in weight, bobbins with Aluminum heads make handling easier. Work is speeded up without added effort. Bobbins can be bigger, matching the trend toward larger head diameters, and more yarn can be carried without overloading supports.

With heads made of strong Aluminum Alloys, these bobbins have high strength and resist corrosion. There's no marking or staining of yarns and they have long life. The heads are not affected by heat and moisture, so there's no shrinking, warping or swelling to destroy their usefulness.

Alcoa Aluminum Alloys are similarly at work in many other places in the textile industry, helping to cut production costs and maintain product quality. ALUMINUM COMPANY OF AMERICA, 1939 Gulf Building, Pittsburgh, Pennsylvania.

ALCOA ALUMINUM

"These Blocks are Dry as a Bone

. . . even when it's freezing outside and warm in here"

"WE KEEP OUR PLANT QUITE WARM — even in cold weather. Yet moisture doesn't condense on the inside of the glass block panels until the outdoor temperature is well below freezing. These PC Glass Blocks insulate so effectively that with an indoor temperature of 70 and a relative humidity of 40%, moisture won't form until the outdoor temperature gets down around 14 degrees below zero. And glass blocks save us plenty on maintenance, because they have no sash to rot or corrode.

"SENSITIVE MACHINERY requires less adjustment and produces a more uniform product when temperatures and room humidities are held constant. Glass Blocks are definitely a help in the control of temperature and humidity, for the blocks have a dead-air space in them that acts as an efficient insulator.

"WE'RE RIGHT NEXT TO A COAL YARD but this plant's as clean as a whistle. Dirt can't filter through a panel of glass blocks. It's all one sealed unit of glass and cement. Since we put in glass blocks we've noticed a reduction in spoilage due to soiling.

"THIS METER SHOWS what a great amount of daylight is transmitted through the PC Glass Block panel. And notice that it is a softly diffused light. The abundance and quality of this daylighting help us in color-matching and inspection of fine fabrics."

MANY textile plants are profiting from the practical advantages of glass block construction. They are solving problems of insulation, maintenance costs and lighting by using PC Glass Blocks. Perhaps many of your operation problems can be solved in this same way.

Get the facts now about this modern industrial building material. Find out what it can do to help you work out your problems. Mail the coupon below for our FREE book that shows how glass blocks are used in many plants and gives convincing figures on their insulating value. There's no obligation involved in an inquiry that may help you save money and improve plant operation.

PITTSBURGH PC CORNING

"PITTSBURGH" stands for Quality Glass

GLASS BLOCKS

Distributed by

PITTSBURGH PLATE GLASS COMPANY

and by W. P. Fuller & Co. on the Pacific Coast

Pittsburgh Corning Corporation
2187 Grant Building, Pittsburgh, Pa.

Please send me, without obligation, your new book of facts about PC Glass Blocks.

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Street_____

City_____ State_____

Announcing HENDERSON'S NEW REPAIR PARTS CATALOG

Send for your copy **NOW!**

HENDERSON FOUNDRY & MACHINE WORKS, HAMPTON, GA.

Without obligation, send me your new Repair Parts Catalog.

NAME .....

FIRM .....

STREET .....

CITY .....

EVERY mill that has used HENDERSON Textile Repair Parts KNOWS they are tops in quality, accuracy and ability to stand up under the hardest use. The new Parts Catalog just issued will be of great value to textile mills as it has been compiled with a view towards rendering a more efficient and effective service to the many users of HENDERSON Repair Parts. It will be sent gladly on request, without obligation. Use the coupon at left and secure your copy NOW.

"Efficient production *24 Hours a day* with GULF QUALITY LUBRICANTS"

...SAYS OVERSEER

Actual photograph of a Gulf lubrication engineer on a Periodic Consultation Service call.

"It has paid us to follow this Gulf Engineer's recommendations for shell rolls and roll necks of these long draft slubbers."

"OUR modern equipment is making a fine production record with Gulf's higher quality lubricants," says this Overseer. "And our maintenance costs are very low! GULF PERIODIC CONSULTATION SERVICE has brought us real benefits."

This large mill, like many others, has found that the use of Gulf's higher quality lubricants is real economy. Lower maintenance expense, improved production, and lower power bills are some of the benefits you can expect from the proper use of these finer lubricants.

The services of a Gulf engineer and Gulf's line of more than 400 quality oils and greases are quickly available to you through 1100 warehouses located in 30 states from Maine to New Mexico. Write or phone your nearest Gulf office today.

this booklet will suggest to you a practical method by which you can improve production and reduce operating costs. Write for your free copy.

GULF INDUSTRIAL LUBRICATION

Gulf Oil Corporation - Gulf Refining Company
5813 Gulf Building, Pittsburgh, Pa. C.

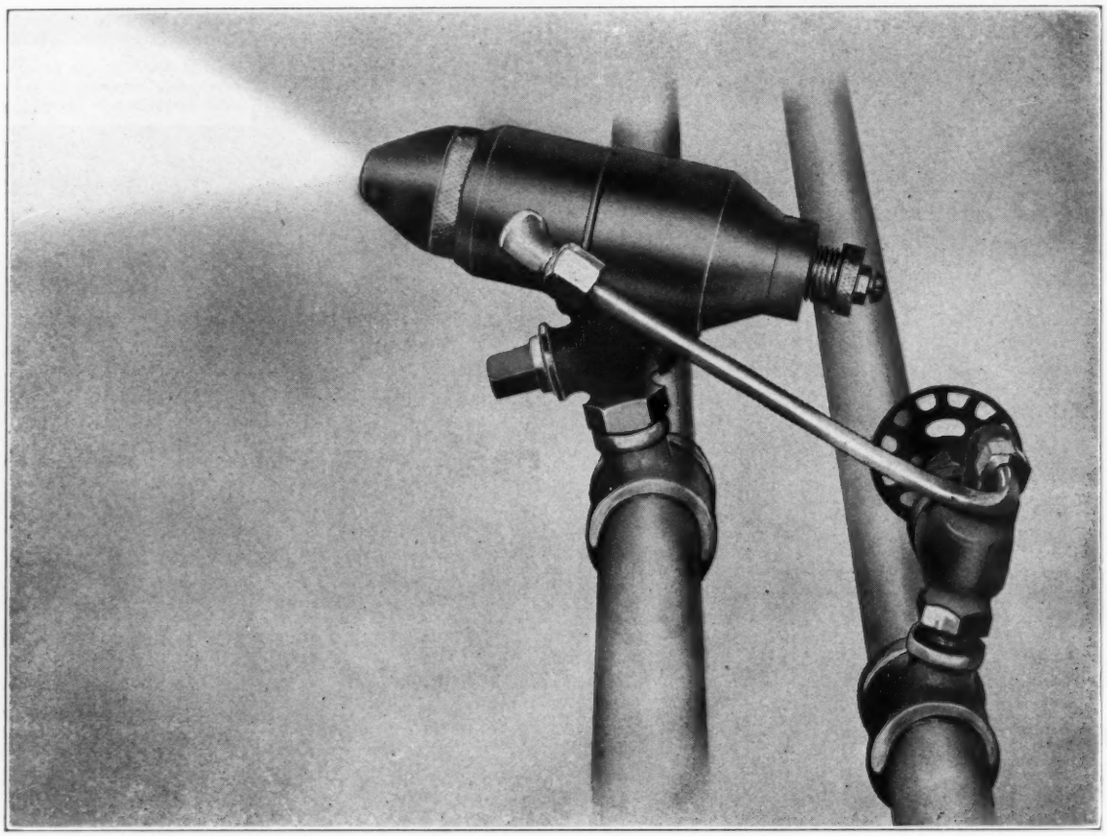
Please send me my copy—no charge—of the booklet "GULF PERIODIC CONSULTATION SERVICE."

Name.....

Company.....

Address.....

CUT HUMIDIFIER POWER COSTS IN HALF WITH THE RIHCO TYPE B HEADS



Patent applied for

These heads mix the air and water *inside* the head instead of *outside,* and put *all* the air to work instead of only *part* of it.

They operate on half as much air as ordinary heads and at lower pressure; therefore using *less* than *half* the power.

Any mill with atomizers that has as much as half the needed capacity can get all that is needed by replacing gravity heads with Rihco Heads, and with no additional compressor or power.

AldricH MachinE

Greenwood, **WorkS** South Carolina

45 FEET LONG.....

But This Giant Loom Handles Easily because of All-electric Control

A DOUBLE OPPORTUNITY

When you use the complete facilities and service of General Electric in textile electrification, you grasp a double opportunity:

1. To improve a machine or process by electrical modernization.

2. To conserve your time by letting General Electric work out and co-ordinate the many electrical details, according to your essential specifications. Then you can continue to devote your major attention to the art of weaving, or to other textile operations.

THIS IS ONE OF THREE felt looms, largest of their type in North America, to which General Electric engineers applied smooth and positive dynamic braking in place of heavy clutches—in co-operation with Crompton & Knowles' engineers. Control is as handy as that of an ordinary sized loom.

BECAUSE of all-electric control, these looms operate as easily as looms of ordinary size:

1. **Dynamic braking eliminates clutch work** — by providing a circuit in which direct current establishes a positive braking action for both normal and emergency stopping. The problems of heavy clutches are overcome, and looms of this size are made practical.

2. **Operated at either end.** Push-button control for run, jog, and stop functions is located at both ends of the loom. At both ends, too, are limit switches which provide for quick stopping in emergency.

3. **Direct current from alternating current in a hurry.** Both of the two driving motors are 3-hp a-c units. Control includes a line contactor for applying ac to the motors; a thermal overload relay to protect the motors; a braking contactor for supplying ac to a copper-oxide rectifier that instantly converts ac to dc for dynamic braking; a jog relay; and a time relay to remove dc when the motors have stopped.

To become better posted on the latest practices in textile-mill electrification, ask for a copy of GES-2451—if you haven't yet received one. General Electric, Schenectady, N.Y.

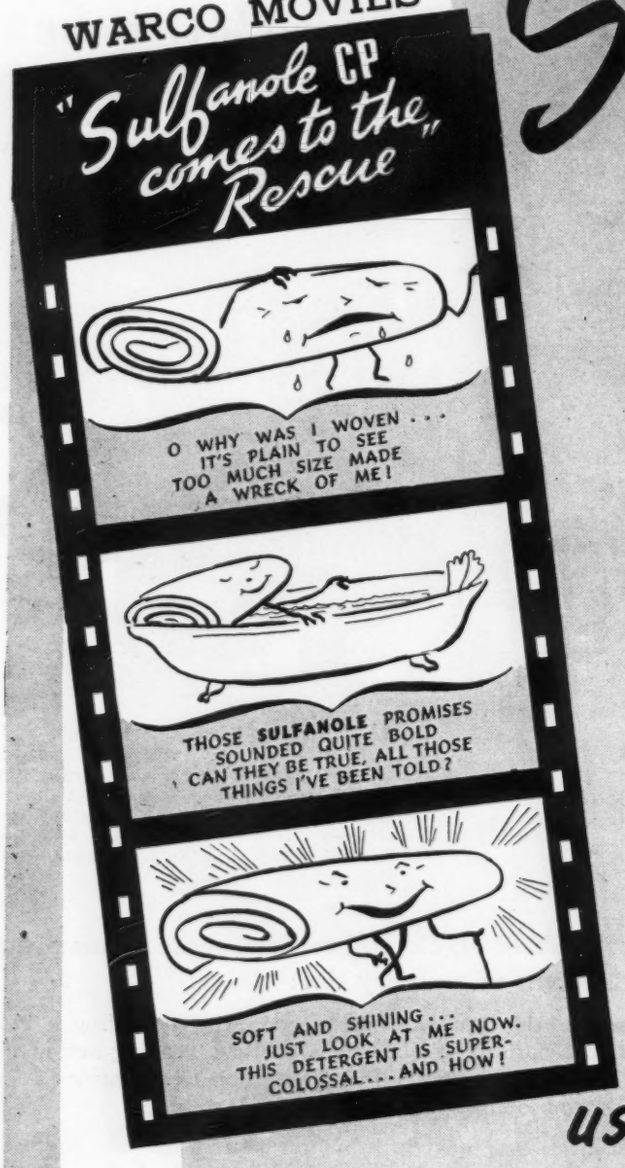
GENERAL ELECTRIC

CLICKED!

Sulfanole CP

A WARCO DETERGENT TRIUMPH that is YEARS AHEAD in EFFICIENCY and SAVINGS!

WARCO MOVIES


"Sulfanole CP comes to the Rescue"
O WHY WAS I WOVEN . . .
IT'S PLAIN TO SEE
TOO MUCH SIZE MADE
A WRECK OF ME!
THOSE SULFANOLE PROMISES
SOUNDED QUITE BOLD
CAN THEY BE TRUE, ALL THOSE
THINGS I'VE BEEN TOLD?
SOFT AND SHINING . . .
JUST LOOK AT ME NOW.
THIS DETERGENT IS SUPER-
COLOSSAL . . . AND HOW!

SULFANOLE CP, SULFANOLE PB's *NEW TWIN*, HAS ACHIEVED INSTANT RECOGNITION AS THE MOST EFFICIENT AND ECONOMICAL DETERGENT FOR RAYON BOILOFF!

EFFICIENT because of its superior emulsifying power . . . . its suitability as a complete soap substitute for scouring, boil-off, and for dyeing of all types of fabrics . . . its effective wetting and penetrating properties at any normal processing temperatures and in water of any degree of hardness...and finally because it will not deposit the injurious residues usually encountered when using soaps.

Economical because you use less than one-half the amount required for soap solutions and because it removes quickly and completely in the rinse.

A Warwick technical adviser will gladly collaborate with you on a formula for your INDIVIDUAL needs.

use SULFANOLE CP for Rayon Boil-off..and Save!

WARWICK CHEMICAL COMPANY
WEST WARWICK, R. I.

FACTORIES IN:
WEST WARWICK, R. I. ROCK HILL, S. C.
BRANCH OFFICES AT:
BETHLEHEM, PA. PHILADELPHIA, PA.
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IMPREGNOLE SALES AGENTS:
IMPREGNOLE CORP., 580 FIFTH AVENUE, N. Y.

CHALLENGER TRANSMISSION BELTING

Resists SHOCK *on the* DRIVE

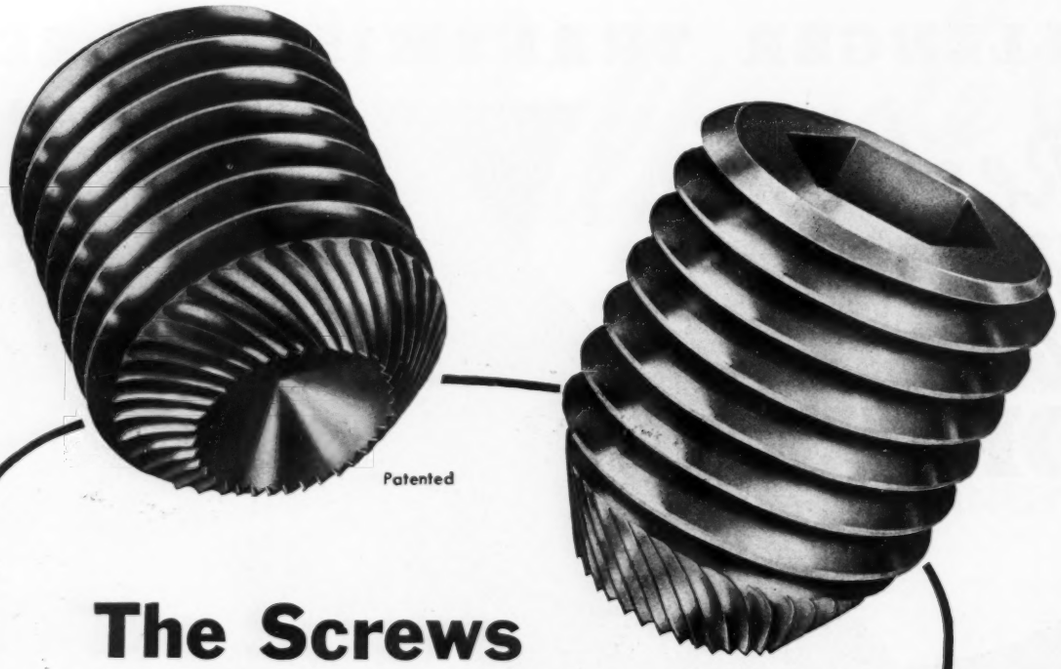
● Shock loads—sudden starting or stopping of machinery, or fluctuating loads—present one of the severest requirements which belting must meet in power transmission service. Inability of the belt to absorb this type of stress results in, if not immediate rupture, at least injury to the belt that leads to premature failure.

Republic's powerful Challenger Transmission Belting is built with a resiliency and surplus strength that provide dependable performance under the emergency operating conditions of industry's most difficult drives. Laboratory technicians, knowing in advance the power to be transmitted on specific installations, assure that each length of Challenger is equal to at least ten times the required stress before it leaves the factory. Similar care in all phases of manufacture and control testing provide COMPLETE serviceability for Challenger Transmission Belting. . . . . REPUBLIC RUBBER DIVISION OF LEE RUBBER & TIRE CORPORATION, YOUNGSTOWN, OHIO.

REPUBLIC RUBBER

HOSE • BELTING • PACKING • MOLDED PRODUCTS

ORDER REPUBLIC RUBBER PRODUCTS FROM YOUR DISTRIBUTOR



The Screws Manufacturers Prefer Today

UNBRAKO

SELF-LOCKING
HOLLOW SET SCREWS
with the Knurled Points

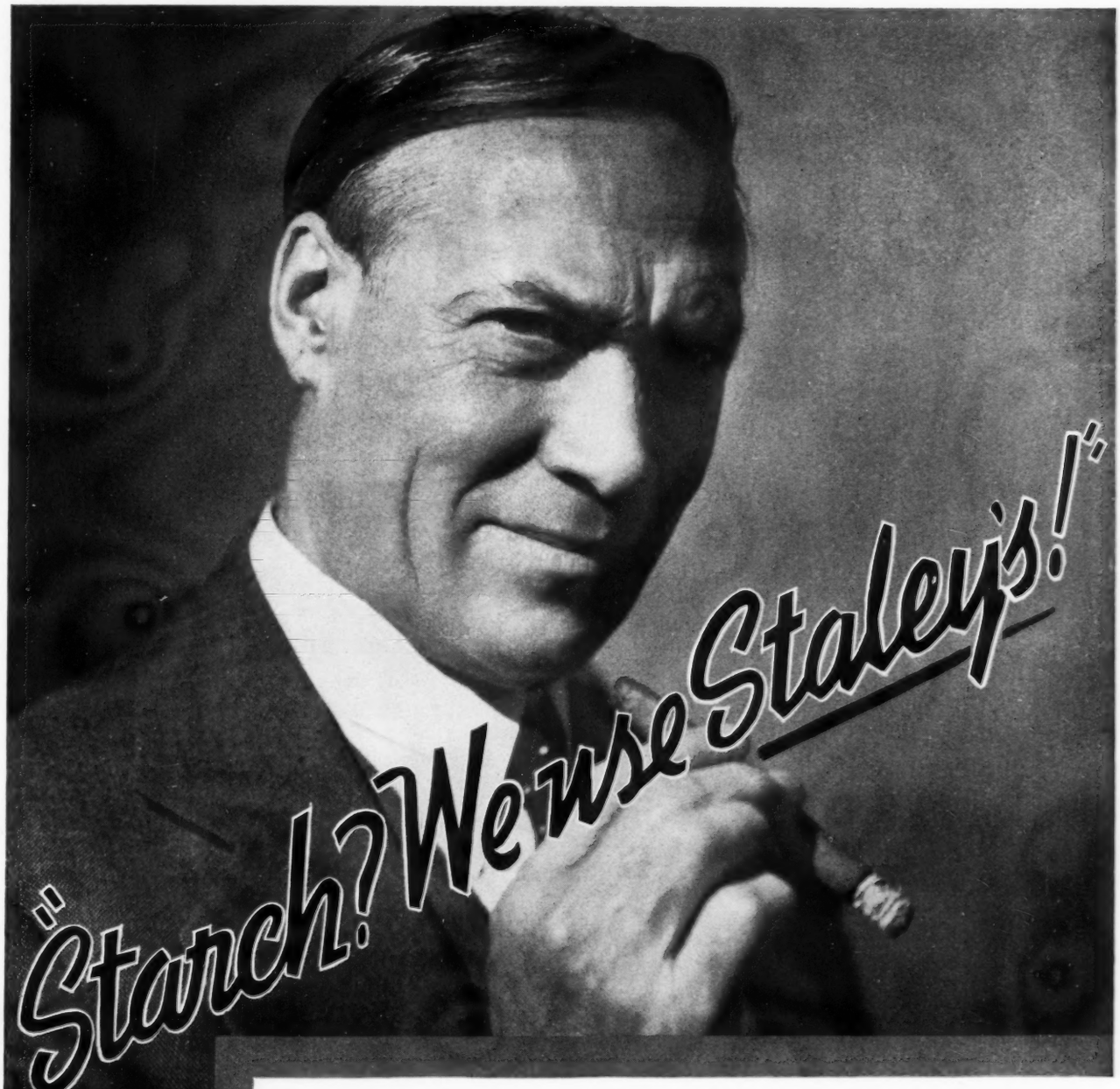
Just set them up with no more than average effort, and the ingenious knurled cup points automatically lock into place with vibration-defying tenacity. Once in place, "Unbrako" Self-Lockers simply can't rattle loose no matter how severe the unwinding tendency. They *stay set!*

And this *unfailing ability to stay set* insures freedom from the common and expensive troubles caused when ordinary set screws work loose. Equip with "Unbrako" Self-Locking Set Screws and you'll enjoy trouble-free operation of your machinery . . . you'll enjoy the savings in maintenance costs they permit.

Remember too, that, in spite of their grip when in place, "Unbrako" Self-Lockers are easily applied, as easily adjusted or removed, and they can be used over and over again indefinitely—always with the same dependability.

Maintenance men in some of the largest and best known textile mills in the country think so highly of the "Unbrako" Self-Locking Set Screws that they are now using no other. Why not send in for catalog and samples?—discover how easy it is to cut down your own maintenance costs and prevent breakdowns by specifying "Unbrako".

STANDARD PRESSED STEEL CO.
JENKINTOWN, PENNA. BOX 582
— BRANCHES —
BOSTON • DETROIT • INDIANAPOLIS • CHICAGO • ST. LOUIS • SAN FRANCISCO



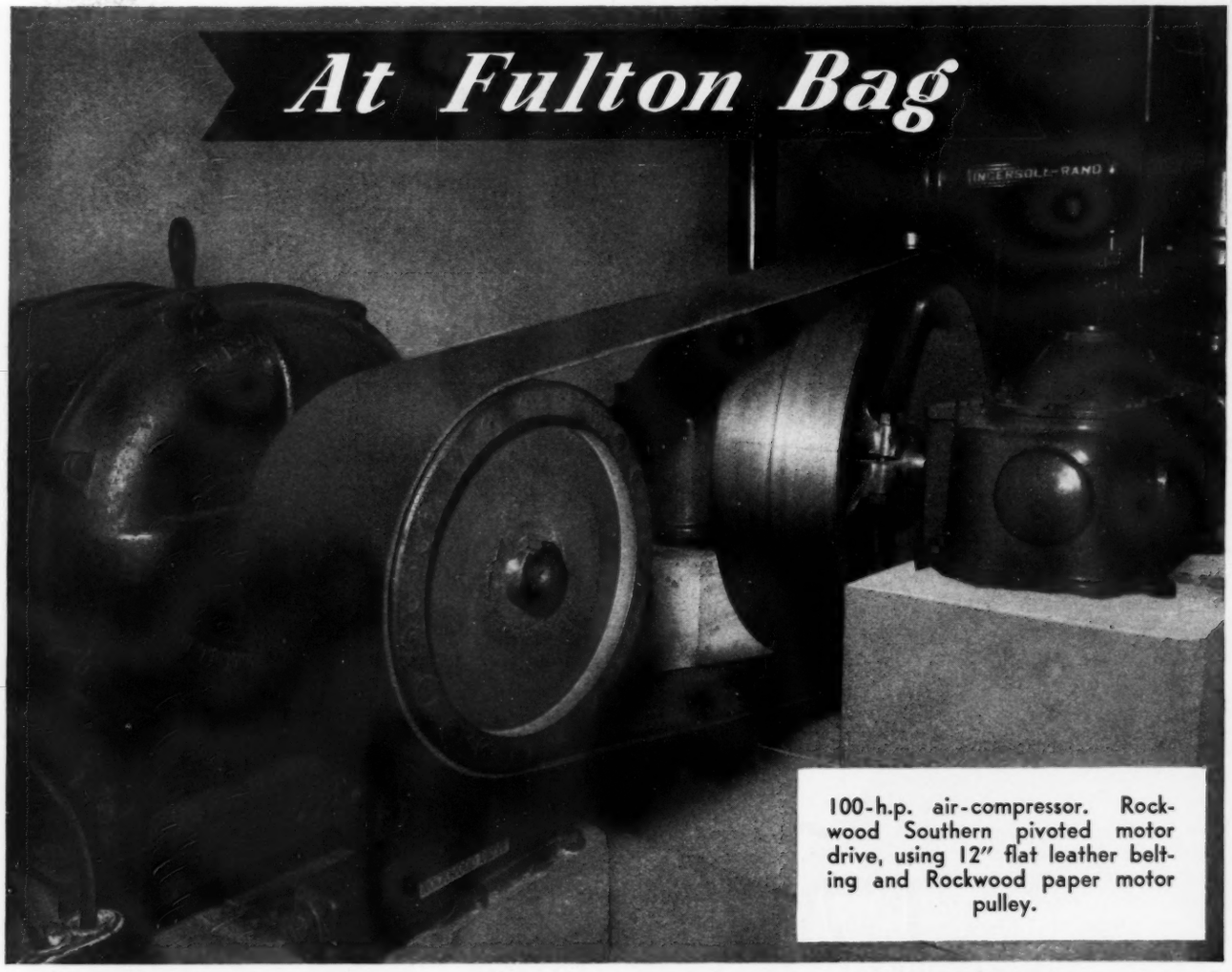
Get experienced mill men talking about starch and you'll find Staley users are SOLD—and they stay sold—on Staley Starches. That's because from Staley you get the RIGHT Starch, right for each specific textile use. It takes long experience, modern laboratories and trained personnel to supply this—and Staley has what it takes.

A. E. STALEY MANUFACTURING CO.

DECATUR, ILL.

ATLANTA	PHILADELPHIA	DALLAS	NEW YORK
SPARTANBURG	SAN FRANCISCO	CHICAGO	BOSTON

At Fulton Bag



100-h.p. air-compressor. Rockwood Southern pivoted motor drive, using 12" flat leather belting and Rockwood paper motor pulley.

● The compressor-drive above, recently designed by us for the Fulton Bag & Cotton Mills, in collaboration with their engineering department, is an example of the *personalized* service we are rendering Southern Mills, in designing and furnishing power transmission equipment best suited to fit *their* particular needs.

Southern Belting is proud of its 50-year record of serving the Southern textile industry with *dependable* power drive equipment. Our service has been amplified to meet changing conditions, and whatever your power transmission needs — leather belting, rubber belting, V-belt drives, Rockwood pivoted motor bases, steel or Rockwood paper pulleys—you can depend on prompt, experienced service from SOUTHERN.

Leather Belting
●
S.B.C. Hairon Round Belting
●
Rubber Belting
●
V-Belt Drives
●
Adjustable V-Belts
●
Rockwood Pivoted Motor Drives
●
Rockwood Paper Pulleys
●
Metal Pulleys

50th Anniversary
1890
1940
SOUTHERN BELTING COMPANY
ATLANTA GA

SOUTHERN *Belting Company*
Manufacturers and Distributors
ATLANTA, GEORGIA

Management's demand today is to "Speed Up Production"... More shifts–more days–fewer shutdowns... Continuous operation puts an added strain on machinery, and makes *dependable* lubrication–the kind known for over 50 years to Southern mills using STANDARD OIL LUBRICANTS –more *vital* than ever.

STANDARD OIL COMPANY

INCORPORATED IN KENTUCKY

YOU KNOW HOW TO HANDLE THIS —

But

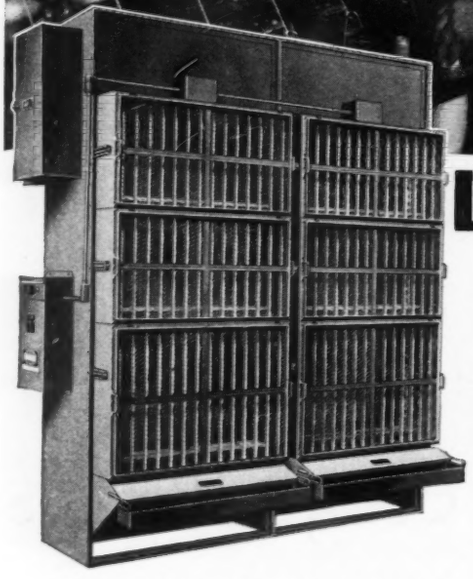
WHAT ABOUT LOSSES CAUSED BY *Dust, Smoke and Soot?*

DYEING, BLEACHING, FINISHING and DRYING operations must be protected from smoke, soot, and dust, to avoid expense and losses due to streaking and discoloration.

Many plants are installing American Air Filter equipment to guarantee clean filtered air to all operations demanding absolute cleanliness.

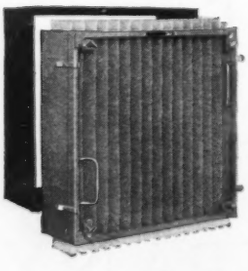
AAF engineers are available without obligation to analyze your air filter problem and recommend a solution. Please write for the address of our nearest engineer.

AMERICAN AIR FILTER CO., INC.
Incorporated
732 Central Ave. Louisville, Kentucky



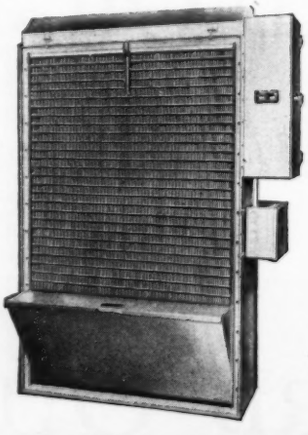
ELECTRO-MATIC AIR CLEANER

Combines electric precipitation as an integral part of an automatic air filter, for highest cleaning efficiency with smoke and fine soot particles. This is the only electrostatic filter on the market that is self-cleaning and can be operated continuously over long periods without interruptions or shut downs for maintenance.



TYPE PL FILTER

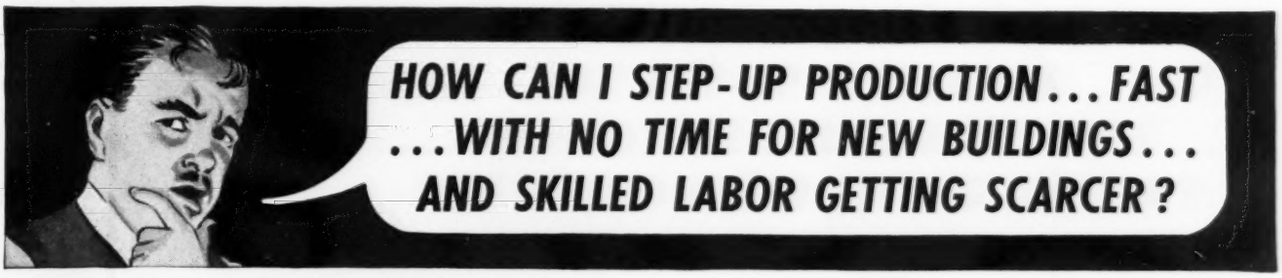
For smaller installations. Dry type, easily maintenanced, and approved by the Underwriters Laboratories. Eliminates practically all dust and some smoke from the air.



MULTI-PANEL AUTOMATIC

The Multi-Panel filter has been proved in principle and performance by years of Service in industrial and ventilating use. Particularly suitable where large volumes of air are to be conditioned and normal cleaning efficiency is adequate. Positive self-cleaning feature places operation on purely mechanical basis, assuring maximum effectiveness and eliminating practically all maintenance. Available in a wide variety of sizes and capacities.

AIR FILTRATION AAF DUST CONTROL



GENERAL ELECTRIC OFFERS AN EFFECTIVE SOLUTION TO TODAY'S EMERGENCY PRODUCTION PROBLEMS!

THE present national emergency demands that industry produce more goods . . . of better quality . . . and at greater speed than ever before.

If there's no time for new buildings, and skilled labor is difficult to get, the alternative is to get more and better production from existing equipment.

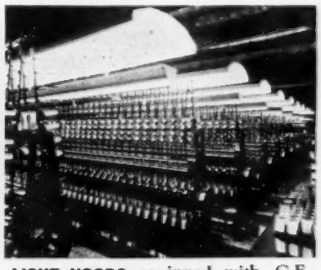
Adequate plant lighting . . . better light for faster, safer, more accurate seeing . . . offers every textile plant in the country an effective means to meet today's emergency production demands.

Industrial lighting surveys show that most plants can go a long way toward better production schedules by bringing their lighting up to modern standards of efficiency. For higher levels of properly planned lighting have a direct bearing on increased production.

Important to the efficiency of any lighting modernization job is the use of good lamps. Because General Electric makes all types of lamps, you can be sure of an unbiased lighting recommendation. Your G-E lamp man or your electric service company will show you how to get the higher lighting levels needed for better production. If you would like to see how other plants have increased production with better lighting, write to General Electric Company, Dept. 166, Nela Park, Cleveland, Ohio. Ask for a copy of the booklet, "Better Light for Better Production."

Better Lighting speeds production in these mills!

THE CIRCULAR KNITTING department of this textile mill found production up and rejects down after light-conditioning with 300 watt G-E MAZDA C (filament) lamps in Glasteel Diffuser units. Better lighting brought better production.



LIGHT HOODS equipped with G-E MAZDA C (filament) lamps on this high spinner serve to develop good lighting on the vertical plane with a minimum of shadow. Seeing is easier and more productive. Working conditions are improved.

THESE FULL FASHION KNITTERS are illuminated with 30 watt G-E MAZDA F (fluorescent) lamps providing approximately 50 footcandles of well-diffused light at the needle bars. Work is more efficient because seeing is faster.

HERE IS ANOTHER EXAMPLE of light-conditioning with G-E MAZDA F lamps. Since this light source is cool, fixtures are mounted close enough to the work to provide high level of illumination without causing discomfort from heat.

MODERN LIGHTING with G-E MAZDA H (mercury) lamps provides "better than daylight" illumination in this machine shop. The lighting was engineered to the job. Shadow, glare, and light quantity are controlled.

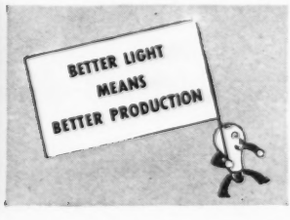
HERE G-E MAZDA H 400 watt lamps mounted on 10 x 13 foot centers provide approximately 50 footcandles of illumination. Good lighting like this aids accuracy by relieving nervous tension. It also helps reduce accidents.

THE TEXTILE INDUSTRY is also using G-E RF (Cooper Hewitt) Fluorescent lamps for many lighting installations. In this South Carolina mill the RF units are mounted 8 feet above the floor with 7 foot spacing and provide approximately 45 footcandles.

RF FLUORESCENT lamps provide excellent illumination in this southern hosiery mill. Under this well-diffused light, threads are so clearly defined as to appear magnified. Inspection is simpler, production up.

G-E MAZDA LAMPS

GENERAL ELECTRIC



ABP *Always meant a lot . . .*

NOW ABP MEANS MORE THAN EVER BEFORE . . .

The improved emblem of The Associated Business Papers is symbolic of its greater significance to advertisers. ¶ Its *Standards of Practice*, guide-posts of ethical business paper publishing for twenty-three years, have this year been made stronger and more enforceable than ever before. ¶ Apace with the times, its member-publications are constantly making their editorial pages more dynamic . . . increasing their hold on their reader-audiences. ¶ Singly in relation to your markets, and collectively as an association, these modernized A·B·P·A·B·C publications deliver an abundance of what it takes to produce resultful advertising.

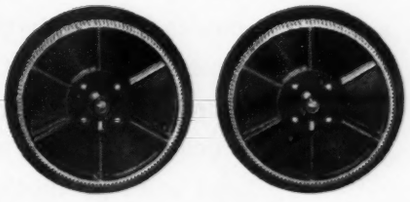
COTTON

Member of The Associated Business Papers, Inc.

LOOM BEAMS

PROVED—
By Performance

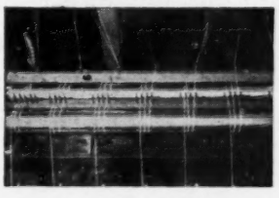
BEAM HEADS



BEAM BARRELS

Superior in Operation and Economy

Other QUALITY Products



THE BACHMAN GUIDE . . . eliminates heavy top rollers. "Blow Outs" reduced about 90%. Permits increase in twister speed.

GEARS . . . Gears of all types —noted for their efficiency and durability.

The beam barrels are made of a select grade of suitable wood, thoroughly seasoned. Journals are made from a tough plow steel to increase the wearing life. The wood grain is protected from moisture by a coat of special sealer and lacquer. All barrels are machined straight and true.

The beam heads are made of a high grade cast iron and are designed to reduce breakage. The pocket and bore of head is machined to fit barrel snugly and squarely.

The loom beams run true. Their sturdy and rugged construction will give long and satisfactory service. Our loom beams will help you to increase your weave room efficiency.

Also manufacturers of special textile machinery, textile repair parts, gears, slasher modernization equipment, and cloth room machinery.

WEST POINT FOUNDRY & MACHINE CO.

(Batson-Cook Company, Owners)

WEST POINT, GEORGIA

5 big features *make this* Industrial Advertising Conference *a "must" for you!*

"CLINICS" . . . informal group discussions of "Tying in Advertising with Selling," "Getting Salesmen's Cooperation," "Direct Mail," "Measuring Results," "Market Information," "Copy Testing," "Programs that Management Will Approve," "Layout, Copy and Illustration," "Allocation of Budgets" and other problems. *Inside information on successful methods and campaigns,* and an opportunity to have *your questions answered.*

ADVERTISING DISPLAY . . . direct mail, publication ads, sales literature and company magazines that are being used by hundreds of large and small industrial advertisers. Awards for outstanding work. *Stimulating source of new ideas.*

GENERAL SESSIONS . . . led by national authorities, on current industrial advertising and sales developments. Enable you to *keep abreast of trends that affect your business.*

RELAXATION . . . annual banquet, show, and dance . . . publishers' reception . . . opportunity to visit friends . . . program for wives, including trip through Ford's Greenfield Village.

CUSTOMER CONTACTS . . . you can visit important customers in Detroit plants, see your company's products being used, get first-hand reactions to advertising, take photographs for use in your 1941 advertising and sales promotion.

GOING TO BUY A NEW CAR? — You can save money by taking delivery in Detroit and driving it home.

Markets and selling conditions are changing. But profitable sales await those alert companies who study the trends and improve their practices. At this Conference you will get new ideas that will help you do a better, more efficient job, and make your 1941 advertising and sales promotion program more effective.

All Industrial Advertising and Sales Executives Are Invited

If your company sells to other business organizations, rather than to the general public . . . you will find this Conference devoted 100% to ***your*** problems. You are invited to attend, whether or not you are a member of N. I. A. A.

Write now for program and advance registration form, to Mr. Henry Doering, Registration Chairman, Truscon Laboratories, Inc.; Box 69, Milwaukee Junction P. O., Detroit, Mich.

Advance Registration Saves You Time and Trouble

No waiting to register . . . your Conference and hotel registrations will be made in advance . . . card, badge, program and room key ready when you arrive—pay $10 Conference fee and go directly to your room or to first meeting.

18th Annual **CONFERENCE** *and Exposition*
National **INDUSTRIAL ADVERTISERS** *Association*
SEPT. 18, 19, 20 . . . **DETROIT** . . . HOTEL STATLER

"WE'LL ONLY NEED ONE COAT WITH THIS NEW DULUX REG. U. S. PAT. OFF. HIGH-HIDING MILL WHITE!"

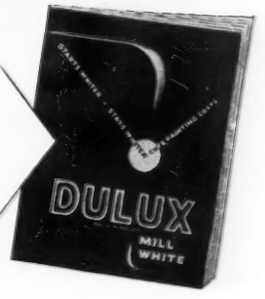
THE greatly stepped-up hiding power of the new DULUX High-Hiding Mill White is setting a sensational money-saving pace! Plant operators find many painting jobs can now be done with one coat instead of the usual two. Except when the present finish is in very poor condition, just one coat of DULUX High-Hiding Mill White will do the job you want.

DULUX saves you time and money with its "ONE COAT" advantage. You need fewer gallons . . . application time and costs are less... and your machinery lies idle for a shorter time.

Intensely white at the start, DULUX High-Hiding Mill White retains its brilliant whiteness far longer than most paints. And that means economy in the long run, because of *fewer* repaintings.

If you would like to know more about this amazing new Mill White, just write to E. I. du Pont de Nemours & Co. (Inc.), Finishes Division, Wilmington, Del.

SEND FOR THIS FREE BOOK



DU PONT
REG. U. S. PAT. OFF.

DULUX

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HIGH-HIDING MILL WHITE

E. I. du Pont de Nemours & Co. (Inc.), Dept. C-90
Finishes Division, Wilmington, Delaware

Please see that I get complete information about DULUX High-Hiding Mill White—and your new booklet.

Name.....

Address.....

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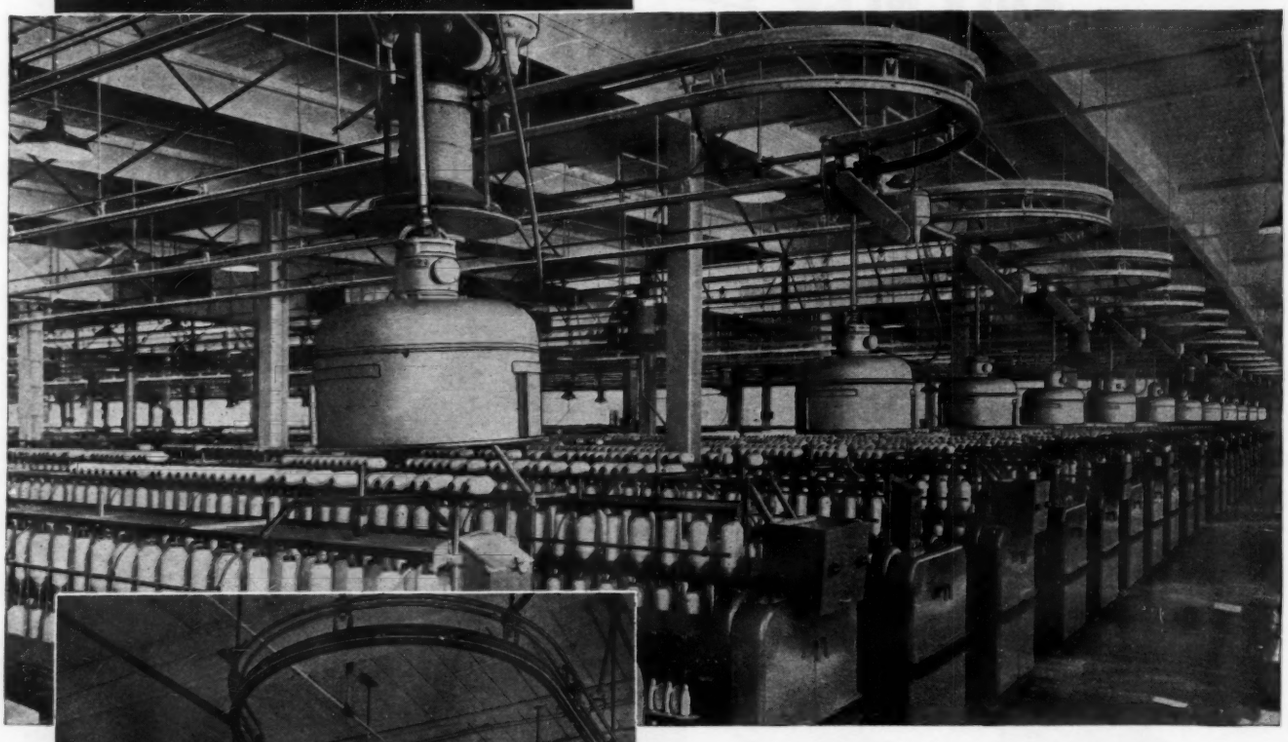

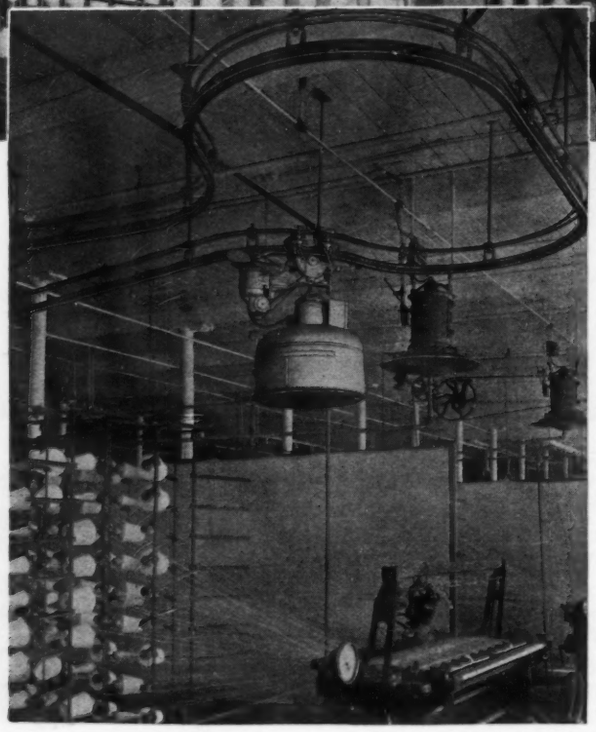

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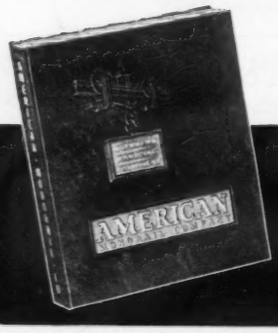

THE AMERICAN MONORAIL COMPANY

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SERVING THE
Textile Industries

SEPTEMBER, 1940
Vol. 104 No. 9

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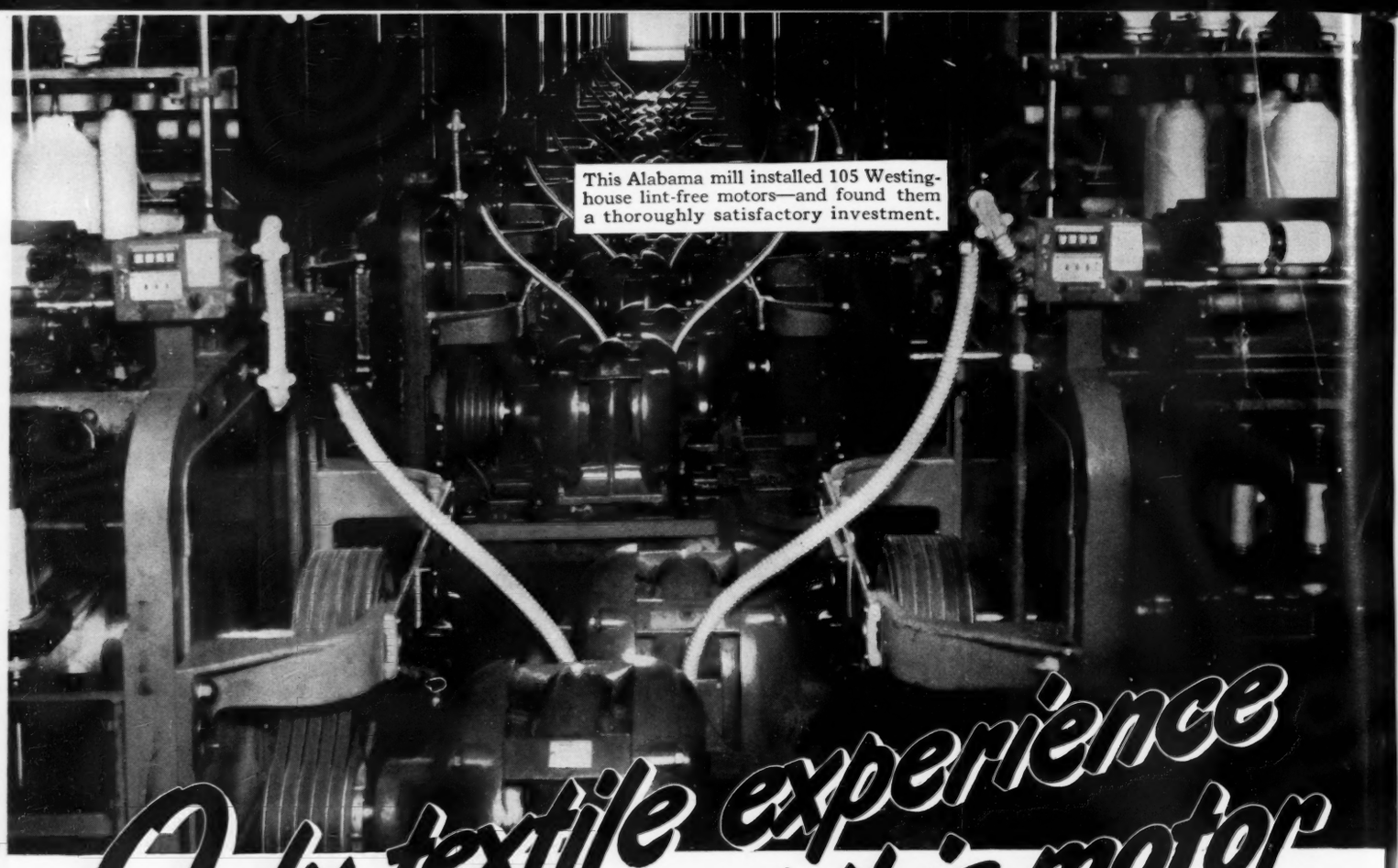
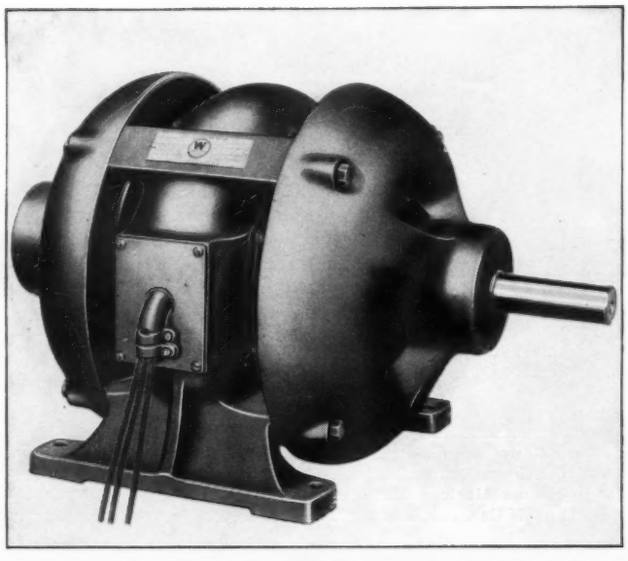


This Alabama mill installed 105 Westinghouse lint-free motors—and found them a thoroughly satisfactory investment.

Only textile experience could build this motor

SUCCESS OF WESTINGHOUSE LINT-FREE MOTOR PROVES VALUE OF ENTRUSTING ELECTRICAL PROBLEMS TO "TEXTILE-MINDED" ENGINEERS



MILL OPERATORS using Westinghouse Lint-free motors have discovered for themselves that this is really a thoroughly self-cleaning motor. They have found that it helps cut costs and gives better all-around service than any motor they have ever used for spinning, weaving and finishing.

This motor, developed to fit given conditions, resulted from ideas gained by our textile-minded engineers co-operating with specialists in motor design.

This same combination of practical textile and electrical knowledge is part and parcel of the service you receive when you entrust any electrical problem to Westinghouse. For fast and capable action, call on our offices in every textile center.

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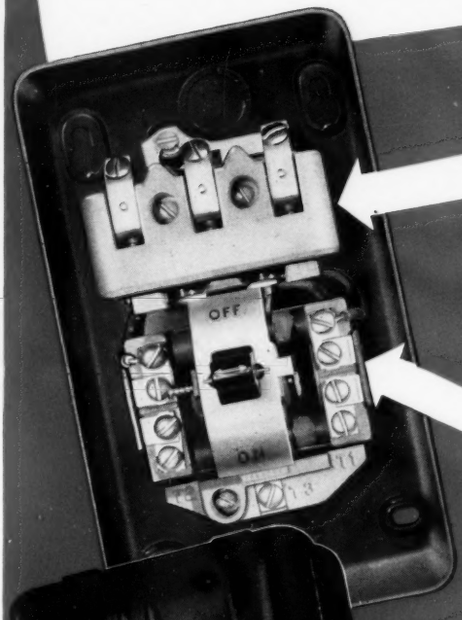
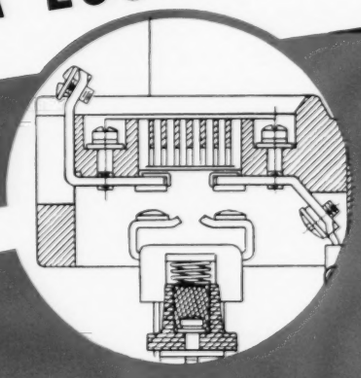
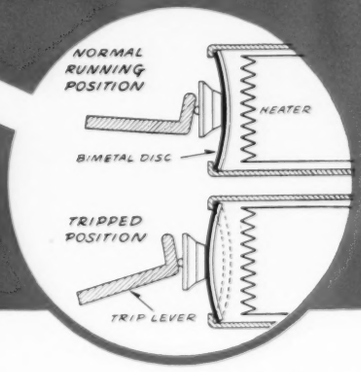
Westinghouse Lint-Free Motors

ONLY WESTINGHOUSE GIVES YOU THESE EXCLUSIVE FEATURES IN A LOOM SWITCH







◀ "DE-ION" ARC QUENCHERS TO PROTECT CONTACTS

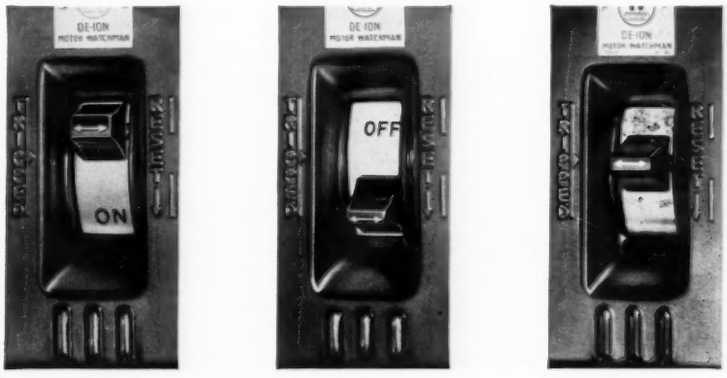
The "De-ion" Arc Quenchers in the Westinghouse Loom Switch confine, divide and extinguish the arc in ½ cycle. Dangerous flashover is prevented—contacts last longer.

◀ ACCURATE BI-METAL OVERLOAD PROTECTION

Bi-Metal's action is unfailingly accurate—fixed by exact calibration at the factory—unchanged by years of repeated operation. There's nothing to renew or replace.

Westinghouse Loom Switch for Motors Up to 7½ hp.

SELF-INDICATING "ON"—"OFF"—"TRIPPED" POSITIONS



ON OFF TRIPPED

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Westinghouse

"DE-ION" LOOM SWITCH

WESTINGHOUSE ELECTRIC

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OUR

CHROME FAST COLORS

THAT MEET ALL SPECIFICATIONS

FOR

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SHORTS AND REMNANTS

Since there is said to be nothing new under the sun, we hope that a certain well known weekly magazine ("C-----r's" —no prizes for filling in the missing letters) will not mind our borrowing an idea from them for just once and devote our page to Past Months, Next Month and Any Month. For we do have a lot of comments for which we are particularly grateful on a recent "first" in the textile field in the July Spun Rayon Number and also on July's editorial on "The Main Job For Us Now;" our October National Preparedness Number will be another first for readers and advertisers both in analyzing the place of the entire textile industry in the current Defense program; and it would be amiss if S and R didn't give advertising and advertisers a boost.

◆

PAST MONTHS

Orchids for Spun Rayon Issue

So many compliments and requests for extra copies started coming in after the July Spun Rayon Number of Cotton was issued and are still being received that we are overcoming our natural modesty sufficiently to say "thank you" for such comments as the following:

W. H. Grier, Supt., Rock Hill Printing & Finishing Co., Rock Hill, S. C. (said to have the largest yardage output of any finishing plant in the world): "I would like to get eight copies of this issue, for distribution to our foremen and assistant foremen in the rayon department of our plant." **D. B. Owens, Pur. Agt., Riverside & Dan River Cotton Mills, Inc., Danville, Va.**: "Our superintendent of dyeing would like to have an extra copy of this". **William J. Kelly, Jr., Sales Mgr., Textile Manufacturing Division, Burkart-Schier Chemical Co., Chattanooga, Tenn.**: "Please send us three extra copies". **Leslie L. Cobb Tennessee Eastman Corporation, Kingsport, Tenn.**: "Well worthwhile to the industry. . . . recommend this issue for the permanent files and references of any mill processing staple fiber rayons." **J. A. Miller, Pres., Exposition Cotton Mills Company, Atlanta, Ga.**: "I want to congratulate you on the wonderful job you have done."

H. H. Willis, Dean Textile School of The Clemson Agricultural College, Clemson, S. C.: "We should like to have permission to reproduce quite a bit of your material which would be very valuable to students studying rayon." **K. L. Simpson, Rohm & Haas Company, Philadelphia, Pa.**: "We have found this issue to be of considerable interest, and would appreciate very much receiving another copy addressed to the attention of the writer." **Ralph B. Hood, Mathews Cotton Mill, Greenwood, S. C.**: "The thing that impressed me most particularly with reference to the manufacturing was the wide variation in opinion as to the best methods of handling rayon staple and I believe it still shows that no one has yet found the 100% answer."

Russell T. Fisher, The National Association of Cotton Manufacturers, Boston, Mass.: "Will you please have two additional copies sent to me . . . I want to cut them up to add much of the material to a reference notebook." **F. S. Ward, Taylor Instrument Companies, Rochester, N. Y.**: "I found the July issue very interesting and congratulate your organization on having done an excellent job in presenting the picture of spun rayon processing"; **Edward Legge, Percy A. Legge, Boston, Mass.**: "There is tremendous future in the spinning of all synthetic fibres, and I hope your publication will lead the way in this new development". **J. L. Brannan, Hermitage Cotton Mills, Camden, S. C.**: "In January of 1933 if I could have had that much information on rayon, I am sure I would not have so many gray hairs in my head today . . . I am very grateful to you and your paper for all the information on rayon and if at any time you put this in book form I would like to have a copy."

W. H. Greenwood, Whitin Machine Works, Whitinsville, Mass.: "There was considerable interest in our organization in going through the July issue, and the subject was certainly handled in a most comprehensive and interesting manner."; **John Black, J. M. Mathes, Inc., New York, N. Y.**: "So far as my memory serves, it is the first Spun Rayon Number to be offered by any textile magazine, so you are entitled to credit for your enterprise in this sound, pioneering step."

◆

NEXT MONTH

Conscription, calling up the National Guard, building up machines and men for national defense, the furnishing of aircraft, guns and ammunition, ships for an adequate Army and Navy—these are the major topics of public discussion right now. The demands of this program upon the textile industry and the part that the entire industry will play in it will be featured in a NATIONAL PREPAREDNESS issue of COTTON in October.

Textile mill activity is already being boosted by Government bids for such equipment as uniforms, socks, underwear, knap sacks, parachutes, mosquito netting, canvas and duck, work suits, towels, barrack bags, blankets, comforters, cotton and wool bunting, tape, threads, etc. Textile mills want to know more about the course of this program and where they fit into it. With this in mind, COTTON's editors have been to Washington; also secretaries of textile associations covering the various cotton, wool, silk and rayon, knitting, underwear and outerwear groups have been in Washington to secure the information of interest to their groups. By putting together the reports of these associations with those of our own staff, we expect to furnish our readers a valuable, timely picture of NATIONAL PREPAREDNESS as it applies to them. Advertisers will also have a valuable opportunity to tell the textile industry how they are "prepared to help them prepare".

◆

ANY MONTH

A recent survey among larger textile mills throughout the U. S. showed that buyers in this industry greatly prefer receiving their advertising information through publications like COTTON than by direct mail. Actually, this preference was approximately two to one in favor of publication advertising.

We were pleased to note this, because we have always issued a monthly manufacturing and management publication for those in the textile industry who are in charge of operation and production. One of the features of our pages has been a constant interchange of information between mills with common problems. We believe that the type of readers attracted by COTTON (Serving the Textile Industries) is the type most likely to be interested in the advertising of any machinery, supplies or services which will increase their operating efficiency or improve their product.

Advertisers seem to have something of the same opinion and to like our audience as they used more space per issue in our pages in 1939 than in any other textile paper. (In locating a store, the merchant seeks the busy street, where the most prospective customers pass) Our readers benefit in having the widest selection of equipment and services presented for their attention each month in advertising usually written especially for them. (In buying, don't you usually go where you can "look them all over?")

◆

Foreign Interest in Rayon

Co-incidental with our July issue were two requests from foreign subscribers—The Fine Cotton Spinners' and Doublers' Association, Limited, Manchester, England, and Companía Textilera Ariguanabo, S. A., Bauta, Cuba, for such information as was submitted in the July issue. In addition to the July issue for these and for the many interested mills in the U. S., a permanent Spun Rayon Handbook is being planned.

◆

"The Main Job For Us Now"

"I have just read your editorial 'The Main Job For Us Now', and I agree with everything you wrote and I wish we could have more messages like this."

H. O. DAVIDSON

Albuquerque, N. Mexico.

"This is certainly good. I hope you will be able to create more public sentiment along this line."

J. L. TURNER

Supt. Dominion Fabrics Limited
Welland, Canada.

◆

"Time Studies"

"In your July issue of COTTON there appeared an excellent article on the subject of "Time Studies and How to Get the Most Out of Them". I wonder if it will be possible for us to get 35 copies of this article."

D. C. McINTOSH

Marshall Field & Co.
Spray, N. C.

Meet "Cotton's" Staff (No. 8)

THE LITTLE MAN WHO ISN'T THERE

In rounding up the pictures of "Cotton's" staff, we tried for a month to catch the occupant of the above desk who has been "part and parcel" of the publication for 21 years. Born in the shadow of a bleachery, the son of a salesman on textile products, he came by his affiliation with the industry naturally.

We sometimes wonder where an editor spends his time. Maybe he is in Washington getting further information for the October National Preparedness Number or maybe he is visiting a textile mill, but he seems to be Out in the Field which is, we believe, the proper place for an editor to be.

Without mentioning any names, there is only one L and no S in the last name if you want to spell it correctly.

Steel—FIRST LINE OF NATIONAL DEFENSE

Steel is essentially a peacetime industry—and America's normal appetite for steel is great.

This is fortunate for all of us.

It permits steel producers to carry on year after year and to find employment for hundreds of thousands of men.

It makes management extend itself to remain competitive—to improve its production facilities—to better the quality of its old products—through research, to devise new products—in order to win in the battle for markets that goes on apace in all industry.

Republic has done exactly that and—in the emergency now facing America—is in a position to supply more and better steel —the first line of any nation's defense.

Republic has invested millions of dollars in plants, in equipment, in research and in the training of men. Republic has expanded its ore supplies—enlarged its blast furnaces — increased open hearth and electric furnace capacity—built new mills and added new finishing equipment. But more, Republic has built an organization of men who know steel.

And now, seeing but dimly through the haze that clouds all business prophecy, but realizing our own deep responsibility, Republic, vital to peacetime prosperity, pledges its every effort to help keep America the way we know it and love it —to keep America safe for Americans—through steel, first line of national defense.

Republic Steel Corporation, Cleveland, O.

T. M. Girdler
CHAIRMAN OF THE BOARD

R. J. Wysor
PRESIDENT

COTTON
SERVING THE
Textile Industries
Vol. 104 September 1940 No. 9

Just How Decadent Are We?

ADOLPH SCHICKELGRUBER, the eminent social philosopher and student of human nature, has loudly, contemptuously and frequently referred to the "decadent democracies". By that, he meant France, England and us. France is washed up; its democracy not only being decadent, but positively decomposed. England is not washing up so easily, but Herr Schickelgruber still has hopes. Then what of us? Is he right or not?

To some extent he is certainly right. Democracy in this country took a long step forward in the direction of decadence about 1930 or 1931, when the people, having got themselves into a frightful mess from the very excesses of their democratic freedom, began loudly clamoring for the government to get them out of it. Now, a republican form of government cannot get its people out of the kind of mess the people were in. It is doubtful if even an autocratic form of government could have done anything about it, but the people, having got themselves into the mess, turned hopefully to a new government which did promise to do something about it. On the strength of these promises, the people allowed this government to assume far greater powers than ever had been conferred upon a national government in this country before, except perhaps during brief wartime emergencies.

This was a second long step along the road to democratic decadence. As government authority and responsibility increases, democracy begins to die. The very essence of democracy is that the people manage their own affairs and meet their own crises and solve their own problems; delegating only such authority to government as is absolutely and inescapably necessary. In a really democratic country, the central government is a necessary evil, hardly touching the lives of the people so long as they pay their taxes and behave themselves in a decent and orderly manner. As the democratic spirit decays, there is an increasing willingness on the part of the people to feel that it is necessary to do less and less thinking and acting and planning for themselves, and let the government do these things for them.

We are now well along that road. States that fought a Civil War over the principle of States' Rights and self-determination have now succumbed to Federal help, which means Federal funds for doing a host of things which, according to the Constitution and long established custom, are no concern of the Federal Government. These Federal funds can come from nowhere except the people themselves, and when the people are willing to let the Federal Government dip into their pockets for money to spend for things that they would not buy if they had to dip into their own pockets, democracy is definitely on the skids.

THE DEMOCRATIC WAY of life is the best of all possible ways of living, but it is not a satisfactory or efficient way of conducting war. War being a ghastly and repulsive business, it is necessary that many people be forced to do things that they would not ordinarily be willing to do. In time of war, it is not a question of what the individual wants, but of what the state must demand for its preservation. Therefore, even the most democratic of peoples have been accustomed to appoint dictators in time of war. The ancient Romans used to appoint a dictator for a specified time, and at the end of his dictatorship, unless this was renewed by the Roman Senate, he automatically lost all legal power. However, this dictator exercised no civil power in Rome except when it was in a state of siege, but was the supreme commander of the armies in the field. This scheme worked fine for a while because the armies were imbued with the republican spirit, but in the course of time the dictators found that their armies would follow them whether the Senate gave its approval or not. From then on, Rome was no longer a real republic and soon drifted into complete dictatorship, civil and military.

We see the same thing going on today. Powers relinquished by the people in a real, or fancied, emergency are never recovered. It is a characteristic of government to endeavor to accumulate power. When enough power has been accumulated, it is only a question of time until some ambitious person in possession of this power becomes the government.

OTHER FORCES are weakening democracy in the United States. One of these is the enormous number of foreign born people who came to this country through no love for us or our institutions and through no dislike of political conditions in their native lands, but simply because they had heard that better jobs

at higher wages could be found in America; the kind of immigrant who never relinquished his ties with the old country, who always dreamed of going home when he had made his pile, who raised his children with the idea of their being foreigners instead of being Americans, who taught the children his native tongue instead of their native tongue, who pointed out to the children the weaknesses and faults of America while glorifying the perfection of everything in his old country. This type of immigrant and his children are material out of which fifth columns can be formed by the dozen. These are not Americans and never will be. They are merely adventurers who are here for what there is in it for them, and who are still loyal to their old country and disloyal to this one. Most of the early immigrants to this country came here as political refugees, ready and anxious to enjoy the freedom of this country and to embrace its doctrines of government. These people are no longer European in thought or inclination, and are as good citizens as any.

Another element of decadence is the army of native born "thinkers" who, for various reasons, have fallen in love with alien theories of government. Under the skillful propaganda of some of our European neighbors, many otherwise intelligent native Americans have become pretty thoroughly convinced that one of these European systems is just the thing to put us back on our feet. It is, with a ball and chain around one ankle. Most of these men like to think of themselves as being identified with the leadership of any movement to introduce European methods of government. None of them ever thinks of himself parked behind a barbed wire entanglement because he didn't approve of the new racket after he helped get it started. These folks seem to think entirely about how much better they could do everything if they were just in a position of authority. But they would want lots of authority, with no backtalk. People of this sort are just born to fall for Communistic or Nazi propaganda. They simply lap it up.

A GREAT MANY other supposedly intelligent people look with favor on European dictatorships because they appear to be more efficient than our system. As far as managing the government or waging war is concerned, they are more efficient, but the efficiency stops there. When it comes to actually getting things in the ordinary course of our lives done efficiently and satisfactorily, nobody can beat the Americans. This is not just a claim; we can prove it. We have got more of practically everything than anybody else has got, except bossing around. We live better than any other peoples on earth, and our high standard of living was created through the extraordinary efficiency of American private industry. This private industry, up until the past few years, was, we must admit, pretty dictatorial. If a man owned a business, he hired and fired as he pleased, and if he didn't want somebody to work for him he didn't have to have any reason for turning him off. A successful business has almost got to be run that way, and it has got to have a real boss whose word is law or it will never get anywhere. Consequently, a great many thoughtless people think that because business can operate more efficiently under a petty dictatorship that government could operate better under a big one. They completely overlook the fact that under a democratic system of life and government the man who is kicked off of one job can certainly find another one if he wants to look for it; the man who doesn't like one job can always tell the boss to go to Hell, and hunt up another one; the individual is free; if his job or his town doesn't suit him he can move. America has therefore developed an extraordinarily efficient industry while preserving complete individual freedom. Nothing of the sort is possible with a political dictatorship. The man who does not like his town may not be permitted to move; the man who does not like his job can leave it only for a prison.

A man has just died whose career illustrates as well as any story could the reason why Americans have led the world in industrial efficiency. This man was born in a small Kansas town. His first job paid him 5 cents an hour carrying tools and wiping grease in a railroad roundhouse. He learned to be a mechanic in the railroad shop, and worked for ordinary mechanic's wages like many another young American who started in at 5 cents or 10 cents an hour, back in the days when that wasn't against the law. When this man was about 33 years old he had saved up $4,500 and borrowed $500 more to buy a $5,000 automobile. Not for the reason that you would naturally assume, but so that he could learn how an automobile was built and prepare himself for going into the automobile business, which he visualized as a rapidly developing proposition. He said that he took this automobile completely to pieces and put it back together again at least 40 times; each time studying, as a mechanic, the construction of this machine and pondering the possibilities of improvement. With such a beginning, this man rose to be the head of the great Chrysler Corporation, which bears his name. He was unusually successful, but the history of the United States has been molded by men like him, who began with nothing, no influence, no inherited position, nobody to push him along. How would you develop men like this except in a democracy? How could they develop? Freedom of action, the right of every man to make a millionaire or a pauper out of himself, as his will dictates, is what has built this country.

FOR THE PAST seven years our government has been trying to kill off the very thing that we now need the worst: individual initiative. The professional humanitarians are horrified at our potential Chryslers having to struggle to get started. Everybody must be started off well enough so that they don't have to struggle. Those who never get started, or who are too tired to struggle, must always have a dear, kind government to fall back on; a government that will feed them and shelter them and sympathize with them. Funny, isn't it, how people who started out with little or nothing and wound up with something don't seem to warm up to these professional humanitarians. Strange, that practically all of those who have made the grade seem to have the same old prosaic prescription for success:

(*Continued on page* 108)

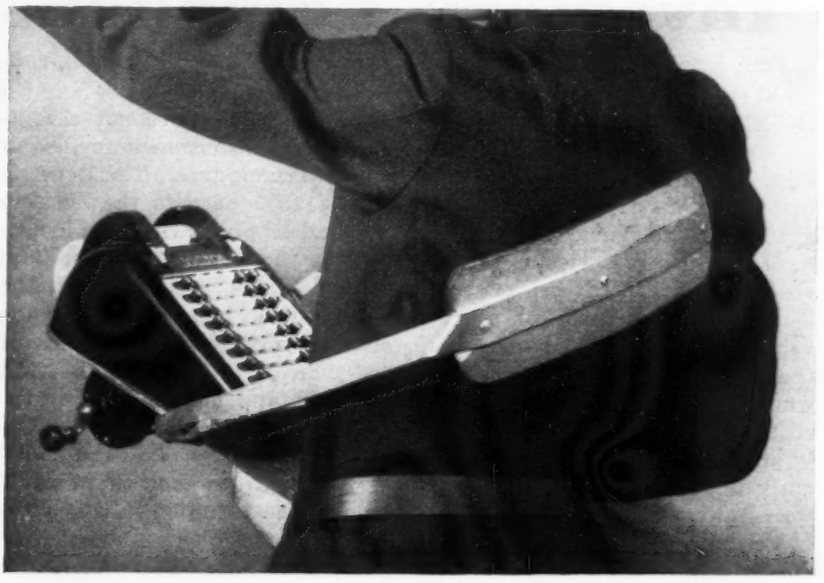
A New Way of Taking Off Picks

A large southern plant devises a method of checking the production of a weave room, with pick counters, that greatly expedites the job

WITH THE use of pick counters on looms, the chore of taking off the picks from the clocks is usually a difficult one. Much time, work and many duplicating operations have been necessary to transcribe picks in the clocks to dollars in the pay envelopes. Most of these operations have been done manually with pencil. Where such operations as the transcribing of figures from sheet to sheet are done manually, there is the ever-present possibility of human error and inefficiency.

In our mill, where approximately 3,000 looms are in operation, equipped with re-set pick clocks, it was quite a job to read the clocks weekly, transfer the picks to the payroll and work out the individual weaver's efficiencies. The pick-man usually started reading the first shift picks immediately after the close of that shift on Friday afternoon. The second shift readings were taken on Saturday morning and the clocks re-set during this reading. By working fast and hard during the week-end, with the exception of Sunday, it was late Tuesday afternoon before the results for the payroll department and the efficiencies were completed. Two working days had elapsed into the new week and 30 man-hours used in the work. The time expended by the pick-man was of less importance, but the two days of elapsed time in the new week was of much importance to the management, because full benefit of the calculated efficiencies could not be obtained with two-fifths of the weavers' working week already passed.

As a result of study and changes the pick-man's work has been so consolidated and streamlined that his work is completed by 8.00 o'clock Monday morning. The payroll department has its work waiting, the overseer and superintendent have the efficiencies of the preceding week, and all this without increasing the cost. The pick-man's work is reduced to 10 hours, he has more time off on Saturday, and everybody is happy.



The man "taking picks" carries a portable adding machine supported in this manner; note large reel which takes up paper strip from machine

Reference to the accompanying illustration will give the key to what was done. Where previously the pick-man had carried ready prepared pick sheets into the weave rooms and had taken off the picks with pencil, now he walks through the alleys adding directly into his adding machine. This machine is small, light (about eight pounds) and costs approximately fifty dollars. It is supported at the pick-man's waist by a strap around his back and by a formed brace passing under the left arm and upward to the shoulder blades. The machine rests on a plywood shelf attached to the brace and strap. The machine legs are fitted into recesses in the shelf to keep it from slipping. It is surprising how comfortable and well-balanced the weight carries. Beneath the shelf is a large fishing reel of cheap make. The spool of this reel is wide enough to take the adding machine strips and is used as a take-up for the strips. This prevents misplacement and loss while in the weave rooms. The pick counters are properly identified as to weaver, style, etc., and this information is written on the added strip for future reference.

After passing through the weave rooms the pick-man works only with sub-totals and totals from the strips. No other record is made or kept of the picks as the strips are filed at the close of the week's work. Fewer errors appear now than formerly and the method is proving a distinct advantage in every way.

Obviously, this system of taking the picks can be used only where re-set pick clocks are used.

We post the picks for the weavers each Monday morning, showing, of course, only the sub-divided totals as to style. They may thus calculate their earnings, but their efficiencies are shown only as one figure for the entire stand of looms. We have had only a few complaints, all of which have been settled with mutual satisfaction.

"Last-In, First-Out" —as a Basis for Inventory Valuation

INVENTORY TAKING frequently seems to present many troubles, but often the valuation of that inventory is much more difficult. In the past, most mills have valued inventories on the basis of the lower of cost or market. When the market on the inventory date was higher than cost, the goods were priced at cost; and when the market was lower than cost, the goods were conservatively priced down to market. Apparently this has been a sound practice. However, it has not been fully satisfactory when following a rising market over the top and down a sudden drop.

A few mills have kept their inventories on a cost basis at all times in an endeavor to make the operating statement show the actual results, regardless of market fluctuation. In general this method has eliminated some of the violent fluctuation in profits that follows the plan of inventory valuation at the lower of cost or market. Sometimes, the cost or market plan has been distorted by the assumption that where goods were applied to open sales orders, then the inventory can be taken only at cost. Experience in the cotton trade during periods of declining markets has demonstrated that so-called "firm sales contracts" are more theoretical than practical.

In arriving at the cost value of the inventories, originally there was developed a plan for averaging the cost. This was later modified to a method described as "First-In, First-Out". Under that arrangement the articles remaining on hand to be inventoried were assumed to be the last articles purchased, opened, or made.

For several years, some people have objected to these methods and tried to develop other plans, many of which were not acceptable to the Government for use in income tax matters. The Revenue Act of 1939 permits the election of another plan, which is identified as the "Last-In, First-Out" method. This assumes that the goods left on hand came from the original inventory at the start of the year, or period, plus the first openings and manufacture if the inventory had been increased. Under such a plan, should the inventory be kept constant, there would be no price variation in the inventory to affect the statement of profit and loss. This theory has made the plan appear somewhat attractive to some managements.

Such a plan, designed to keep almost a constant investment in inventory, would *in a rising market* result in the company showing an operating statement with a smaller profit than would be the case had the inventories been taken at last cost. Operating statements of that kind might be favored by taxpayers in that the amount of income taxes would be correspondingly lower in that year. They would be favored by investors in that the method would be equivalent to the use of a price reserve so as to absorb the drop in prices that would eventually come according to all past experience.

While it does appear on first acquaintance to be a desirable thing to do, a little study of the details involved brings out two important considerations: (1) The detail procedure becomes complicated when applied to manufactured articles, and (2) the change to this optional method should be made at a time when the cost prices are unusually low and the quantity high.

Another objection noticed by some people is that it disturbs the customary balance sheet relations between inventory and borrowings. These practices have been developed over a long period, and for several years it will be necessary to compute the inventory in both ways so that special explanation may accompany the balance sheet.

It is not difficult to see how the two methods might apply in any one year, but it requires considerable work to compute the inventory in all details and learn the actual advantage or disadvantage over a long period of years. Then, it is noticeable that no uniform conclusion can be drawn. But, the indications are that two observations may be made: (1) If a company does expect to make a profit in only one year out of three or more, then the total income tax payments might be reduced by selection of the "Last-In, First-Out" method, and (2) if a company has a record of usually showing annual profits, then it is possible that the "Last-In, First-Out" method might increase the income tax payments over a long term of years.

It is noticeable that the selection of a change to this method will require more information about actual costs than has often been available. And, in turn it may require that the tax department's field agents go much more into all the details of the inventory than has been customary in the past.

Looking backward, it is easy to see whether market price trends were up or down and to locate the advantageous time that could have been selected as the lowest price point at which the change should have been made. But looking into the future is more difficult, especially at this time. With the surplus cotton growing here and the present foreign situation, a runaway cotton market is not expected. Within a few years the prospects are that cotton may be selling at lower prices and then may be a proper time to consider changing from the lower of cost or market to the "Last-In, First-Out" plan.

In the meantime, more discussion and examination of both advantages and disadvantages should be made before electing a change to the new method.

New Finishes for Textile Fabrics

A broad review of recent developments in chemical finishes developed to impart specific properties to fabrics; report on practical tests

By Margaret S. Furry*

MANY chemical finishes are now being used to develop in fabrics certain desirable properties they do not possess naturally, and to make yarns and fabrics more suitable for specific uses. For instance, these finishes can add such desirable features to fabrics as making them crease-resistant; water-, spot- and perspiration-repellent; mildew and moth-resistant; and fire-retardant.

Special finishes are intended to be of a permanent nature, that is, remain at least during the greater part of the life of the fabric, instead of disappearing with one or even several launderings. But actually very few are that durable. However, proper care will often prolong their serviceability.

Since many finishes are designed to increase the serviceability without changing the appearance of the fabric, it is essential that the fabrics be well labeled. Informative labels on fabrics should tell the consumer how durable the finish is, what to expect from it in wear, and how to care for the fabric in order to get the best service from the special finish.

Crease-Resisting Finishes

One of the outstanding developments in fabric finishing is the crease-resisting process. In use, cotton, linen, and rayon fabrics tend to become wrinkled. They lose their shape and desired appearance. But by this chemical finish they are made crease-resistant, which means they will not crush so readily and will recover more quickly than untreated fabrics of the same kind.

The crease-resistant finish is overcoming cotton's greatest disadvantage—its wrinkling propensities. During the past season many cottons heretofore never made crease-resistant have been given this finish. Among them are sports cottons, ginghams, voiles and lawns. These fabrics are practically a "must" in every woman's summer wardrobe.

How resistant to creasing treated fabrics are and how effective this resistance is on repeated laundering is of interest both to fabric finishers and textile consumers. At the Bureau of Home Economics, in order to answer such questions as these, cotton, linen and rayon dress fabrics which had been commercially treated were purchased at a local store and laundered 5 times each by both mild and severe laundering processes. By testing the fabrics before and after laundering, the effectiveness of their resistance to creasing was determined. An instrument called a flexometer, developed at the National Bureau of Standards, was used to measure the crease-resisting properties of the fabrics.

According to the results of these tests, the method of laundering largely determines how much and for how long fabrics will keep their crease-resistant property. Rayons and linens particularly need to be laundered carefully in lukewarm water and neutral soap.

Crush-resistant velvets are very satisfactory. Synthetic resins give the pile such an excellent "come back" that a velvet dress needs no steaming to recondition it after it has been worn.

Widely different effects can be produced with synthetic resins. Besides crease and crush resistance, various synthetic resins may be used to prevent slippage of the yarns in woven materials so that the fabric will not lose its shape. By this treatment, rayon lining materials will not slip and fray or pull out at the seams.

The Synthetic Resins

Synthetic resins are also used to preserve the sheen of a glazed chintz for producing a wool-like finish on spun rayon fabrics, and as binders for pigments or for talc or clay to add weight to cloth. In the countries at war, fabrics used to cover windows in black-outs are probably of this last type. Colors dyed on printed silk and rayon become considerably faster to washing if treated with a synthetic resin. Pattern effects, embossed fabrics, and leather-like cloth are also produced with the aid of synthetic resins.

Many of our new cottons require no starch in laundering for they have been specially treated with a so-called permanent starchless finish. Some of these treated lawns and voiles have acquired a degree of crispness and freedom from fuzziness which makes the fabric smooth and fresh looking. Claims are made that such cottons do not soil as readily as untreated cottons, do not become limp in damp weather, and do not become linty after washing.

This effect is produced by the use of swelling or dissolving agents such as cuprammonium solution, tri methyl benzyl ammonium hydroxide, and ethylene oxide. These agents tend to fuse the yarns together where they cross in the woven piece and to give a certain resiliency or stiffness to the fabric which will withstand repeated laundering w i t h o u t change. Cellulose may be predissolved in such an agent and this solution precipitated on the fabric as a pure cellulose film. The action of sulphuric acid in making organdy is more a swelling or

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parchmentizing process rather than a true solution of the cotton.

Recently casein and soy bean proteins have received considerable attention as possible finishing agents. They give a soft feel and improve the dyeing properties of fabrics. Finishes of various types are being produced also by means of cellulose esters and cellulose ethers. These compounds are used, for example, in producing a full clothy feel on sheetings and muslins, and, to a more limited extent, for obtaining special effects on spun rayon materials.

In the manufacture of "fused" shirt collars which require no starch, thermoplastic materials are used. These compound fabrics are porous and are made by uniting permanently, by means of heat and pressure, two outer layers of cloth to a third lining piece. This lining is either a specially woven cloth of cotton and a few cellulose acetate yarns or a cotton fabric coated with cellulose acetate or some thermoplastic resin. A solvent such as acetone gelatinizes the cellulose acetate permanently uniting the three plies of fabric.

Controlled shrinkage has indeed been a great achievement in textile finishing. Shrinkage especially to the cotton apparel trade was a serious handicap, but now manufacturers can cut to the correct size and customers can purchase garments in exact size. By one well-known process which involves mechanical adjustment and setting of the dimensions of the fabric during the drying operation, cotton fabrics may be guaranteed not to shrink more than 1 per cent on laundering. Wool also may now be made shrink-resistant by treating it with chlorine or sulphuryl chloride.

Antiseptic and germicidal finishes are being talked about a great deal these days. They aim to prevent the growth of bacteria and to have the property of counteracting perspiration odors. These finishes are used on a wide variety of materials including dress goods, mattress fabrics, and shoe linings. It is claimed that sanitary finishes applied to certain goods assure the ultimate consumer a sterile article no matter through whose hands it may have passed during the ordinary routine of merchandising.

Water-Repellent Finishes

A great deal of stress is being put on water-repellent finishes these days. Since most of our water-repellent finishes make fabrics spot and perspiration-resistant, as well as water-resistant, they are truly a very important and valuable functional finish.

Water-repellent cotton broadcloths, twills, and gabardines have become widely used for rain wear, golf jackets, and other sports apparel. Water-repellent fabrics are also used in the manufacture of shoes; in the upholstery trade, for porch furniture fabrics, hammocks, rugs, etc.; for curtain materials and for dress fabrics.

Water repellency in fabrics may be achieved by different processes. The alum-soap process for instance, was used for many years. A method in general use now consists in application of small quantities of paraffin wax to the fiber in such a way that the natural characteristics of the fabric are maintained. The wax is generally applied from stable emulsions. Although the finish is not fast to washing or dry-cleaning, many laundries and dry-cleaning establishments are able to re-process the water-repellent finish at small cost. Synthetic resins, if they are deposited on the surface of the fabric, also give water-repellent effects.

Recently a new durable water-repellent finish has been developed which is radically different from the alum-soap and wax emulsion types. This new finishing material is a complicated chemical compound with a complicated chemical name, octadecyl-oxymethyl pyridinium chloride. This reacts chemically with the fiber producing another chemical compound which is water-repellent. It is lasting and is not removed by washing or dry-cleaning. Besides making the fabric stain and perspiration resistant, it gives a soft, smooth finish.

At the request of Congress, and in connection with the cotton utilization program of the United States Department of Agriculture, the Bureau of Home Economics is investigating the possibility of increasing the use of cotton in women's hose. The finishing of the hose to improve their properties is being studied. One of the properties is water repellency or "splashproofness," for splashes of rain and muddy water from wet pavements, if allowed to penetrate into the fabric are very objectionable so far as appearance is concerned and the difficulty and inconvenience in washing out the spots. Cotton hose were treated with this new compound, octadecyl-oxymethyl pyridinium chloride, and the effectiveness of the treatment after one, five, and ten half-hour washings in a launderometer were determined.

The hose were tested for water repellency by the drop test and by a total immersion test which was devised by the Bureau especially for this study on hose. It was found that these treated hose were very much more water-repellent than untreated ones and that this property remained even after 10 washings. Moreover, this treatment applied to cotton hose greatly improved their elasticity as well, so that the treated hose stretch more easily and fit more snugly than untreated ones.

Fire- and Flame-Retardants

Fire-retardant finishes aim to cause the material to resist burning. The chemicals which have been found suitable for fire retarding may be classified into three groups based on the manner in which they bring about this property: salts such as certain ammonia compounds that smother a fire by giving off non-inflammable gases; salts such as ammonium phosphate and boric acid mixtures which melt when heated and produce a glaze over the surface, sealing off the fibers of the treated fabric; and salts like stannic oxide which by loading the fabric make it less susceptible to ignition and less able to perpetuate a kindling temperature.

One example of the second group of fire-retardant finishes is a mixture of boric acid and borax. Curtains, draperies, ironing-board covers, fabric heat deflators, and

(*Continued on page* 63)

A Visit through a Traveler Plant

PHOTO No. 1

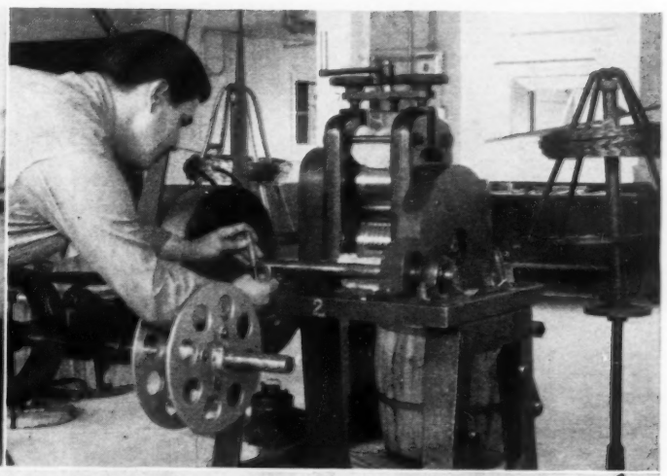


PHOTO No. 2

THE accompanying photographs, made by COTTON'S editor-photographer in the plant of the Carter Ring Traveler Co., Gastonia, N. C., show in part some of the processes through which a ring traveler passes before it is ready for the textile plant. Mill men are fastidious about their travelers, which though only a very small proportion of the supplies used by textile plants, are as necessary and as important in their own right as the hands of a clock are to a watchmaker.

Wire is purchased by the traveler manufacturer in varying diameters according to the size of traveler to be made, with differences in degrees of hardness and alloys being a couple of the other specifications. Photo No. 1 shows both large and small diameter wire, the former to be used for twister travelers and the latter for cotton textile spinning travelers.

This wire passes through a rolling machine so that the wire may be rolled to the correct width and thickness; it is tested for accuracy from time to time with a micrometer (Photo No. 2). The accurately rolled wire is transferred to the traveler cutting machine, shown in Photo No. 3, where it is cut to the desired shape and circle.

The travelers are next mixed in a special alloy pot with a carbon compound and are placed in an oil burning carburizing furnace, where they are heated at high temperatures for from two to ten hours depending upon the weight of the traveler. This process gives the traveler complete carbon penetration. The carburizing process is automatically controlled. Photo No. 4 shows the travelers being taken from the oil furnace and being dumped into cool water. Note the intense heat of the alloy pot.

The travelers are brittle at this point and must be tempered in an electric tempering furnace for lengths of time depending on the weight of the traveler.

Next the travelers pass to the finishing or tumbling process through the tumbling action of various types of materials where they are given polish and rough places are removed.

From this point on the traveler is untouched by human hands, to avoid corrosion; next it is inspected and placed in the package.

PHOTO No. 3

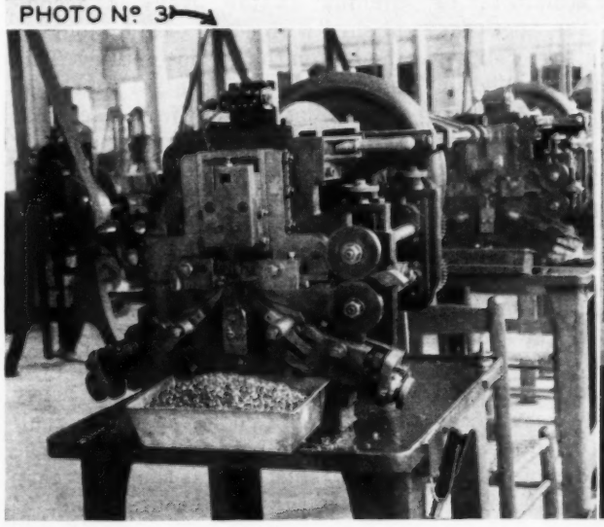
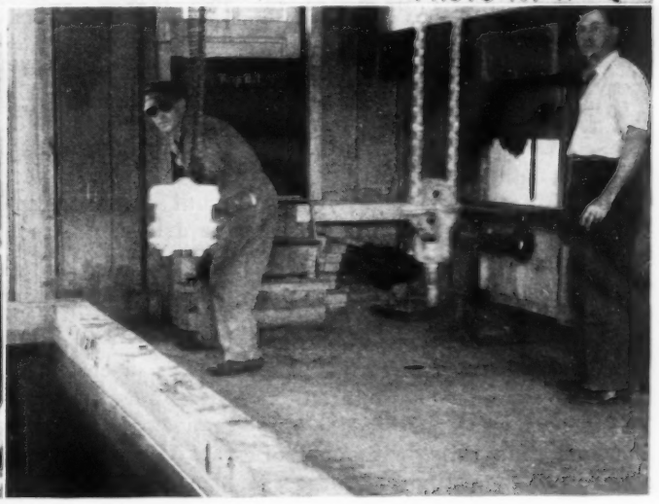
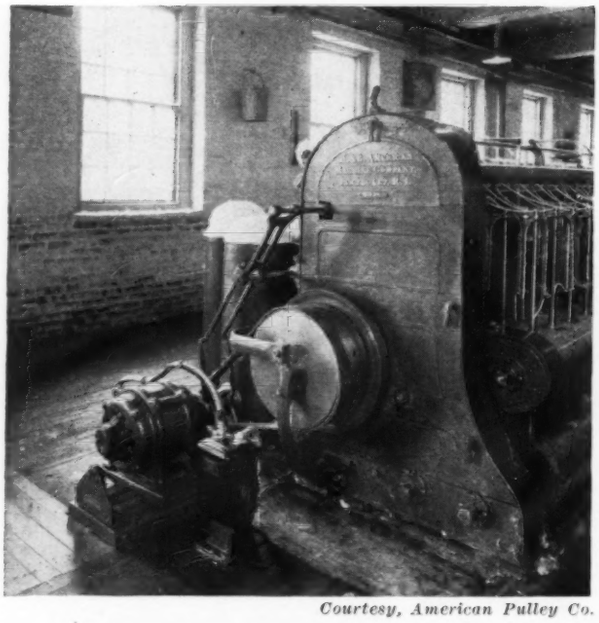


PHOTO No. 4



Pivoted Motor Base Drive on Roving Frames



Courtesy, American Pulley Co.

By Francis A. Westbrook

Application permits "inching" to within an eighth of a turn of the flyers. Tight and loose pulleys on frame utilized . . .

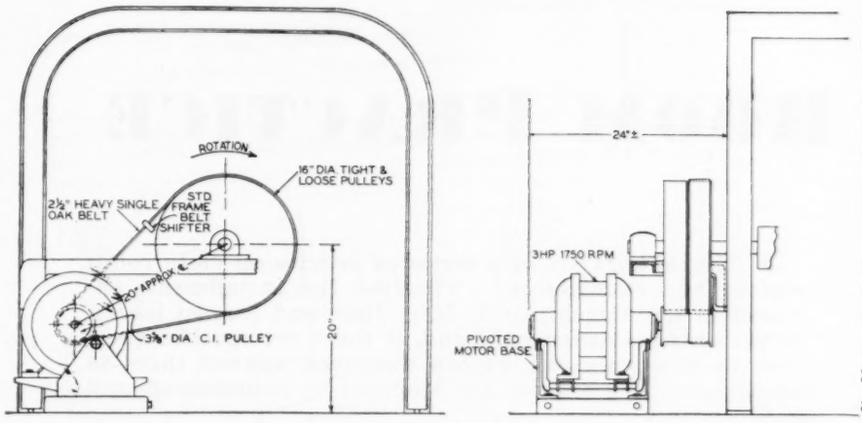
BOOTT MILLS, Lowell, Mass., has worked out a very satisfactory method for individual drive, on very short centers, for its roving frames which permits of inching to within an eighth of a turn of the flyers. It has also reduced bearing and belt maintenance to a minimum, and has improved production and quality by means of pivoted motor bases with flat leather belt drives. The present set-up was not arrived at in one step but has been the result of experience and power transmission developments covering a considerable period. This experience and the results obtained are so successful that a brief recital of this case history appears to have every likelihood of being helpful in other power transmission problems.

Most of the roving frames in this plant were originally belt-driven from line shafting. When individual motorization arrived, v-belt drives with the usual short centers were installed, with standard textile mill type induction motors having normal torque and starting current characteristics. The motors were mounted on the floor on slide rails, with control apparatus consisting of across-the-line starters. The mill found, with this drive, that they did not have entirely satisfactory starting conditions, and that inching of the flyers was practically impossible.

The real solution to the problem was found during recent months when it became necessary to put more roving frames into production, although even then the first attempt was not successful. This consisted of using a very short, fixed center, flat belt drive with the tight and loose pulleys already on the frames. Double flanged pulleys with a diameter of 3⅝ inches and face between flanges of 5½ inches to permit of shifting the belt were installed on the motors. Ordinary 2½-inch single oak belting was used to transmit power. However, the short centers, necessary on account of space limitations, made the drives far from successful.

Realizing that pivoted motor bases previously installed on other types of drives in the plants had greatly improved those drives, it was decided to try them on these new ones. The result was immediately successful, due to the fact that this type of motor base provides belt tension in direct proportion to the load. Belt and bearing life, as well as maintenance, were reduced to a minimum. In addition, inching to within an eighth of a turn of the flyers is now easily accomplished.

Moreover, the drive equipment, including motor, control and transmission, is simple and inexpensive. An ordinary master switch with low voltage protection is adequate instead of a delayed type starter. In the second place the tight-and-loose pulley arrangement makes it easy to start the motor across the line, and inching of the flyers is accomplished with equal ease by jogging the belt onto the loose pulley. This high degree of control and ease of inching is due to the fact that the motor is running continuously and the full flywheel action of the rotor is secured, its stored-up energy being imparted to the tight pulley when the belt is jogged. That is, it is no longer necessary, when inching, to start and stop the motor by jogging it through a delayed-type starter, so that peak demands on the motor are greatly reduced and cooler operation realized. The pivoted motor base makes shifting of the belt easy because the shift occurs under re-



duced tension.

The use of this motor base makes it possible to utilize the reactive torque of the motor to control the belt tension over the range of the driven load. Under no-load conditions the belt tension on the loose pulley is at its minimum, which makes the shifting or jogging of the belt easy. The pivot action of the base also takes care of belt stretch and maintains the correct tension. Such bases may, of course, be mounted on the floor, on pedestals to raise them above the floor, or on brackets attached to the machine. The accompanying diagram shows how it was done at the Boott Mills. In this case the motor is a 3-hp., 1750 r.p.m., standard textile type, with the motor pulley of a diameter to give the desired speed to the jackshaft of the roving frame, with a ratio of about 6 to 1. The tight-and-loose pulleys on the frames are 16 inches in diameter. Both 3 and 5-hp. motors used. The drive is in use on 10x5, 9x4⅝ and 8x4 frames. Some are Saco-Lowell and some are H & B frames.

As might be expected from such an efficient transmission of power the production of the roving frames has been increased and the quality improved. The frame operators like the drive because it has simplified and speeded up their work, and the overseers are equally pleased.

New Fabric Finishes

(*Continued from page* 60)

fire-smothering blankets can easily be made fire-retardant by this method. Re-processing must be done after each washing.

Recently ammonium sulphamate has been used to impart flame-retarding properties to fabrics. A new chlorinated resin has also been recommended. It makes fabrics weather-resistant as well as fire-resistant and is suggested for tents, awnings, covers for haystacks, trucks, fire blankets and for airplane wings.

Several different types of compounds are used for developing a moth-repellent finish on wool, hair, and fur. One which is used very widely at present, pentachloro-dioxy-triphenyl methane, is similar in structure to an acid dye though it has little or no dyeing properties. However, it is quite fast on wool. Silicofluorides, arsenites and various alkaloids are also used.

Mildew and bacterial growth on textiles besides making unsightly stains and musty odor, cause more or less rapid deterioration in strength, rendering the material useless for its intended purpose. Certainly a fabric adequately treated to prevent such growth has markedly increased durability and utility. A mildew-resistant fabric has increased value to the consumer.

The properties of a good mildew-resisting agent are that it must be uniformly distributed in and on the fiber, must not affect the fabric strength or cause undue shrinkage, preferably it should be colorless and odorless, should withstand laundering, dry-cleaning and weathering, and be non-toxic to human beings. Chromium and copper salts, silico fluorides, certain chlorinated phenols, salicylanilide and copper and zinc napthenates have been recommended.

In connection with the work on finishes at the Bureau of Home Economics, the problem of obtaining a satisfactory treatment for making textile materials resistant to mildew is also being investigated. An exploratory survey of such finishing treatments has been made.

A large number of treatments which were considered of possible value for this purpose were applied to unbleached cotton duck and their effectiveness in preventing mildew was tested according to the standard procedure. Treated strips of cotton duck after inoculation and incubation with the kind of mildew prescribed in the procedure, namely, Chaetomium globosum, were tested for breaking strength. The loss in breaking strength of the treated fabric expressed in terms of the corresponding untreated material was obtained. The smaller this loss in breaking strength, the greater the resistance of the fabric to becoming mildewed, that is, the greater is the protection furnished by the mildew-preventing treatment.

Of the 135 finishing treatments that were applied, 35 were found to give excellent protection. Ten of these, some of which were developed by the Bureau, can easily be applied in the home. The study is now being extended to determine the effectiveness of these treatments after exposure to weathering for various periods of time, after storage and after repeated laundering.

Occasional Accident

The occasional accident is usually a symptom of inefficiency existing over an extended period. For example, the careless worker who was hurt must have been careless for some time without being hurt—but most likely not without costing the company real money in terms of slip-shod work and errors not immediately detected. And, the piece of work tumbling from a truck hitting a man's foot is only a dramatic reminder that many pieces of work have probably been tumbling from trucks *without* hitting someone's foot—but, again, not without costing someone's wasted time and energy. It follows, then, that educational work in safety does more than prevent accidents—it steps up efficiencies all around.—"*Management Information*", *Elliott Service Co., Inc.*

CLOTH ROOM PRACTICE

(Part Six)

By Erwin Hard

• This is Part Six of a series of articles on cloth room practice and management. The first five installments appeared in the March, April, May, June and August issues. As the series is nearing the end, if there are specific questions or problems you wished discussed, submit them to the editors. The articles are prepared by experienced mill men.

THE WORK of a cloth inspector is of great importance to any mill. Many times very important decisions have to be made by the inspectors, such as, if a piece of goods has one or more defects in it the inspector must decide whether the piece is first or second quality.

Much depends on the nature of the defect. If it is a small one, or one which the buyer will accept if properly burled or combed, the inspector should do this work the first time it is run. This saves re-handling and allows the piece to pass on into first quality goods with no danger of the piece being mislaid. If the defect cannot be allowed to pass it is marked for the convenience of the weaving department. A soft mill crayon, such as is used for marking roving, is best for this as it can readily be rubbed off and does not leave ugly marks on the cloth. White or light colors may be used, depending upon the type of cloth made.

Uniform Cloth Grading

It is usually a very difficult part of the cloth room overseer's work to get each inspector to grade the cloth *exactly* like all the other inspectors in the department, and yet this is a very important function. The inspectors must keep certain fundamental things in mind at all times if the standards of firsts, seconds, etc., are to be uniform.

In our plant we make it a daily practice to select certain cuts of the various grades from each inspector's work for "re-inspection". We have no particular time during the day for doing this, so we can always get a fair average of the work this person does. The overseer then runs these cuts over one of the inspecting machines, in the presence of the inspector that first ran the cloth. This gives the overseer an opportunity to point out to each inspector his or her errors and also affords the inspector the chance to ask any question that is not clear to her.

NAME	BAD WEAV.	BUNCH	OIL	JERKED-IN FILL	ROPY FILL	BAD COMBING	KINKS	DRAW-BACK	SLASHER SPOTS	REED MARK	THICK PLACE	THIN PLACE	THREAD OUT	TEMPLE MARKS	TOTAL
Mary Smith	/	/	/												3
Alice Brown		///		/											4
Fay Brewer		///					/								4
Mary King		////									/				6
Ora Hawley		//													2
Agnes Crowin		//													2
Elizabeth Town		///			/						/				5
Alice Foote		//	/												3
Hazel Coats		/				/									2
Ethel Jones		/													1
Essie Timms		///													3
Ada Green		/			/										2

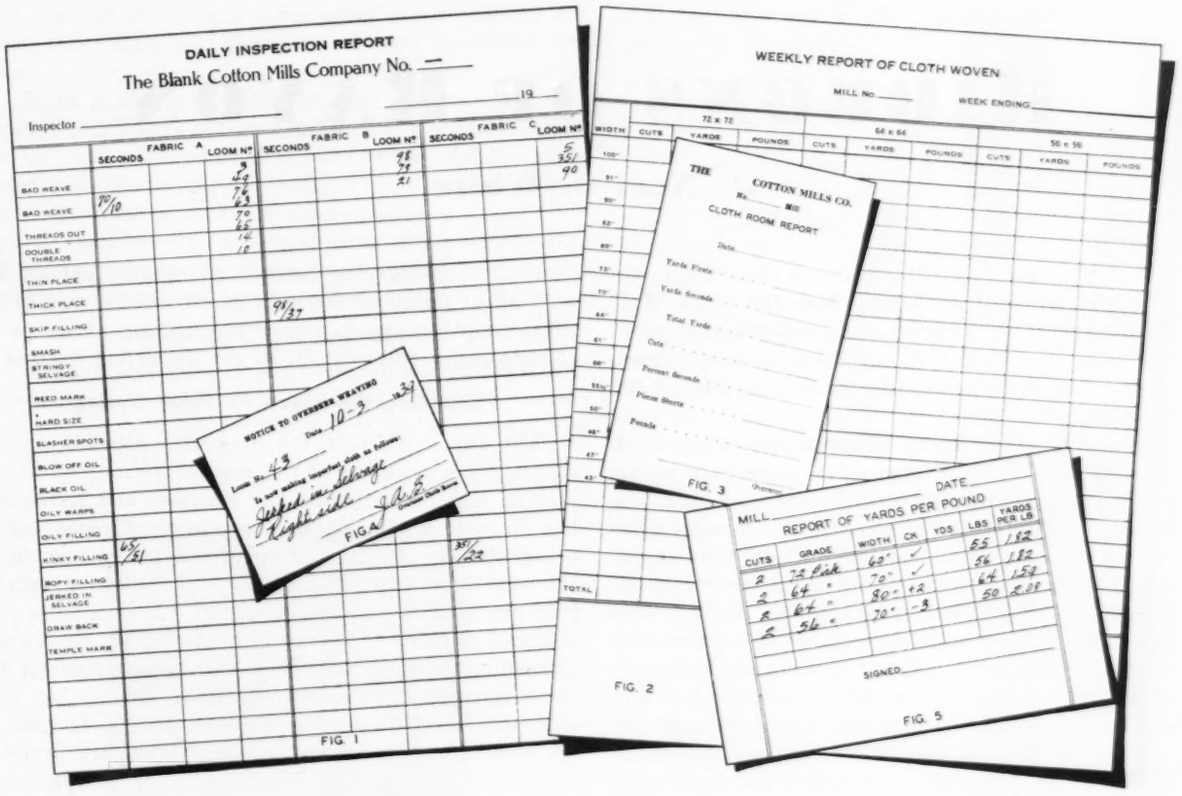
Form used by overseer in re-inspecting the work of the cloth inspector.

While the cloth is being run a form is used and the defects which had passed unnoticed by the inspector are tabulated. A copy of this report is posted in the cloth room so each inspector can ascertain just how well her work is being done; the inspectors can also compare their work with that of other inspectors. A copy of the report is filed in the superintendent's office for a day-to-day or week-to-week comparison. See accompanying form that is used.

A Check on Remnants

Another operation which is difficult to control without some well planned system is the cutting of remnants or shorts from the main piece. In our plant we have a truck by each machine and require the inspectors to keep any short pieces cut off during the day on their truck. Also, all cuts run by any inspector bear her individual stamp, which enables us to trace back any piece. We require each inspector to put her stamp on the remnants. The overseer looks over each truck at the close of the day's work and in this way he can see just how many remnants each inspector has cut out. This is tabulated for future reference by the overseer.

We have found it profitable to have a well trained inspector go through all of our seconds, after they have been returned from the cloth table in the weave room. This person should be the best inspector in the department. These seconds that have been shown up in the weave room are run slowly over a specially illuminated table which shows up defects readily. Many of the smaller defects can be corrected



and in many cases a cut may be reclaimed for first quality cloth.

Another real advantage is found here to harmonize the work of all the inspectors in that the overseer can see what each person is putting into the seconds. A counter is attached to this table and the amount of seconds is recorded daily. This gives us a double check on the amount of our seconds.

The inspector also makes out a report of the causes of the seconds, a copy of which is passed on to the weaving department so they may be studied by the overseer of weaving.

Very few mills make exactly the same goods, therefore it would be difficult for one mill to adopt all the system of another mill's cloth room. The suggestions given here are those which the writer believes might be helpful to any mill regardless of the type of goods manufactured. Each mill can, however, work toward securing uniform inspecting and grading from each of several employees.

Cloth Room Reports

The daily report made by each cloth inspector in our mill is very useful and comprehensive. A copy of this report is shown in Fig. 1. It will be seen that this report shows the name of the inspector, the style, the grade and the loom numbers; also, the causes of seconds are listed in the first column on the left side of the page. A copy of this report is passed on to the weaving department so the overseer of weaving may have a complete "picture" of the causes of his seconds for that day.

The weekly cloth report, Fig. 2, is a summary of the daily reports condensed from the report shown in Fig. 1. This gives a composite "picture" of all goods processed during the week. Fig. 3 is a daily summary of all inspectors' work, one copy of which is sent to the superintendent and another to the weave room overseer. Fig. 4 is a ticket used to notify the loom fixer immediately of any loom making a second due to mechanical defects, etc. This saves many yards of cloth from becoming seconds.

Fig. 5 is a copy of our report on yards per pound. The cuts to be checked are yarded off at the folder, weighed, and then the yards per pound calculated. The column marked "CK" shows how many points light or heavy the cloth is running. This is a very important record as it serves as a splendid guide in the manufacture of the yarn, regulation of humidity, etc. One copy of this is given the superintendent and another is given spinning room overseer. The writer believes that it is a very important part of the cloth room overseer's work to see that his reports are accurate and well prepared.

Overseer Is A Salesman

Every supervisor's job is a salesman's job. As a part of management in direct daily contact with men in the ranks, the supervisor has the responsibility for *selling the company*, its *policies*, its *plans*, its *methods*, and its *goals* to his men. Often is requires a higher type of salesmanship to sell ideas than to sell actual products. The supervisor's selling job, therefore, requires some preparation, possession of much information, and an interest in carrying these ideas to his men.

If you will think of yourself as a salesman, you will be much more inclined to *lead* your men than to *drive* them.

Good salesmen learn all they can about the products they sell. Good supervisors learn all they can about the ideas, the policies, the methods, the operations, and the company plans which they must sell to the men under them.—*"Management Information", Elliott Service Co., Inc.*

RIBBONS OF RAYON

By Noel D. White

SINCE THE manufacture of rayon has been improved to such an extent that the price of it made of a genuine competitor to natural silk, most ribbon mills have found it expedient to adopt rayon in place of the more expensive, natural product of the cocoon filature.

The quality of all kinds of rayon too, being much better and more reliable than they were only a few years ago, induced its adaption whenever possible. The uniform evenness of the filaments, the increased facility in obtaining level dyeings, the adaptability for solid and fancy patterns and multi-color designs made the use of rayon practical in all kinds of textiles. This is especially true of silk ribbons, which are mostly woven today with one or more of these synthetic fibers.

A few months ago, having had occasion to work in a large ribbon mill that displayed a shingle announcing "Manufacturers of Silk Ribbon", I was surprised to find that the only ribbon in which silk entered in its make up was a chiffon velvet ribbon in which the silk, forming the frame-work to hold the velvet pile was hidden in the back of it. This ribbon will be described later. The many styles, sizes and patterns of all the other ribbons woven in this mill were of one or more of the rayons.

The low priced ribbons that used to be made of a warp of raw silk, straight from the bale, without being thrown and filled with tram in the gum, are now woven with a warp of rayon and a rayon filling. Rayons have displaced silk altogether in most ribbon mills and the product looks just as good in appearance, it is easily dyed, takes as good a finish and can be sold a lot cheaper than the lowest priced ribbons of other days.

The construction of and the operations involved in the weaving of ribbons with rayons are much the same as for the real silk ribbons. The important thing is to be cautious in the selection of the rayons. An indiscriminate choice has been the cause of many failures. Owing to the different affinity each rayon has for dyestuffs it is easy to understand that if a viscose rayon is used in the warp, the same kind or a similar one should be used for the filling also, if the ribbon has to be dyed into a solid shade.

Plain weave or fancy pattern ribbons, to be dyed in one color, must be woven with warp and weft rayon of the same nature. On the other hand the difference in affinity possessed by the various rayons can be used to advantage when fancy colored patterns are woven into the ribbons and dyed in two or more contrasting colors in the dye-bath. Here is where a lot of ingenuity can be used to a good purpose.

The designer must have a thorough knowledge of his rayons. Even though the rayons of today may be the acme of perfection the different nature of each makes it necessary to become thoroughly acquainted with all of them, in order to avoid trouble and grief, when adapting any in either the making of warps or of choosing a filler for it, to get the effect desired.

Choosing the Rayon for Piece Dyeing

The rayon affinity for dyestuffs depends on the chemical construction of the rayon, the method of obtaining and regenerating the cellulose and hardening the filament of the finished product. Viscose rayon, being obtained by the action of sodium hydroxide on the vegetable pulp, has affinity for those dyestuffs that dye best on mercerized cotton, but in a more pronounced degree. The rayon produced by the cuprammonium process has also a marked affinity for the same dyestuffs. The nitro-cellulose rayon has considerably less affinity for these dyestuffs. If used in the weaving of ribbons containing any of the first two mentioned rayons it will be found hard to dye into a

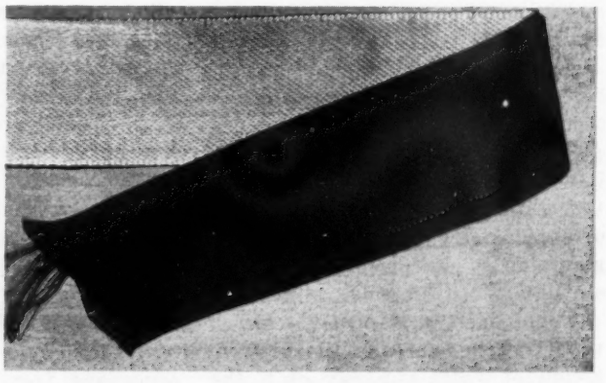


Fig. 1, Silver and black viscose face and filling dyed; acetate rayon satin face undyed . . . .

solid shade. Having more affinity for basic and some acid colors nitro-cellulose rayon is more generally used when dyed ingrain and with fast dyes and woven into ribbons of fancy colored patterns.

The acetate rayons have an affinity for dyestuffs peculiarly their own that can be taken advantage of in weaving ribbons of distinct character. They are admirably suited in producing, on piece dyeing, any combination of various colored patterns. This is illustrated in Fig. 1 which shows a ribbon that is called double or two-faced satin ribbon.

The warp is of viscose and acetate rayon and is woven with viscose filler. On one side of the ribbon the satin is raised with the acetate rayon and with the viscose on the other side. In this case cupra-ammonium rayon could be used also, in place of the viscose, with equally good result. Previous to dyeing the ribbons are scoured in the usual manner. In Fig. 1, in which the viscose has been dyed black, the acetate has been

left undyed showing a silver gray satin face on one side, the filling and the satin face on the other side black.

With a similar combination of rayons any two shades of ribbons can be dyed in the same bath. One rayon can be left undyed to show white and the other dyed with the proper dyestuffs, or both rayons can be dyed any two contrasting shades desired. Any color design, checker, stripe, polka-dots or anything demanded by fashion or fancy can be produced by properly selecting the rayons for warp and weft.

Weaving Checkered Ribbons

Many styles of ribbons are woven with colored rayons in fancy checkers and plaids that require a great deal of careful study on the part of the designer. Fig. 2 shows a taffeta ribbon with a small checkered pattern, woven with colored rayon yarn. The warp is

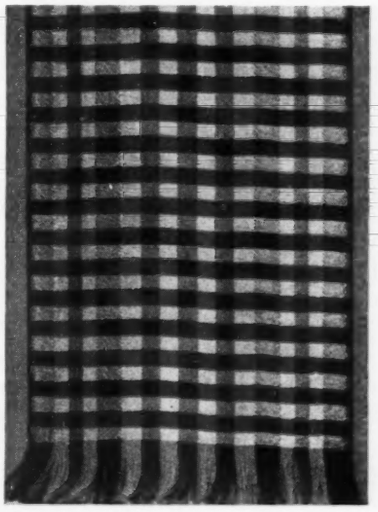


Fig. 2, Three colored skein-dyed warp. Filling dyed on long skeins in combination of 28 inches red and 28 inches left white. (See Fig. 3.)

made up in stripes of white, red and navy blue yarn dyed in skeins of regulation length. The filling is also dyed in skeins, but in what is called "combination skein dyeing." This is done by reeling the yarn in skeins of suitable length and dyeing only part of the skeins, leaving the other part white or dyeing it another shade or color. In this kind of dyeing the combination must be studied carefully, to dye just enough of the skein so that, when each colored part of the thread in the skein is shot into the warp, there is enough of it to make the intermittent checkers or plaids equal and correct.*

In this illustration (Fig. 2) the checkers are square in the center and rectangular on both sides. That was accomplished when making up the warp, by laying side by side the desired number of colored threads. The

*This type of work must be carefully performed. Some dyehouses make a specialty of this kind of dyeing. Provided the correct number of inches are dyed, there is a remote chance for the naked eye to detect where one color ends and another begins: The thread is very fine, the dyeing usually ends and begins in the selvage, and in dyeing half the skein, the dye is not cut off abruptly as if done with a brush and paint, but the dye shades upward by capillary action for half inch or more, fading into the white or lighter color.

Fig. 3, showing a skein dyed in the combination required for patterns in Fig. 2 and Fig. 4 . . . .

yarn for the filling was made into skeins of 56 inches circumference, one half, or 28 inches of it was dyed red and the other half left white (see Fig. 3). When wound on spools the successive lengths of red and white threads shot into the warp produced the irregular small checkers, as seen in Fig. 2.

In Fig. 4 a checkered black and white pattern is shown, in which the warp is an alternate black and white stripe and the checkers are produced by weaving into it rayon that had been dyed a combination white and black. In this case it took 56 inches of black and 56 inches of white to obtain the pattern, consequently the skeins had to be 112 inches in circumference, or about 144 inches long.

Another interesting pattern is one containing checkers of 9 distinct shades produced by three colors in the warp and three similar colors in the weft. The combination in this pattern is arranged to form a

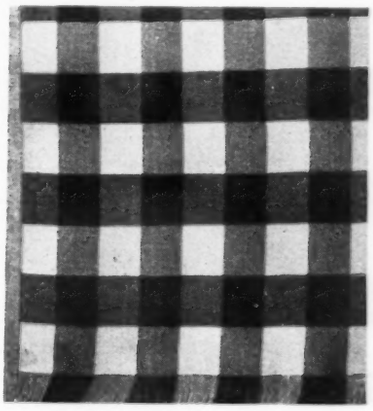


Fig. 4, Black and white checkers. Warp dyed in regular skeins. Filling dyed on long skeins, 56 inches black, leaving 56 inches white . . . .

square of nine checkers, each one of a different shade. The warp consists of a yellow, an apple green, and a jade green stripe of equal width. The yarn for the filling is also dyed a combination of the same three colors, each for a length of 56 inches. When each of these three colors crosses the warp at the assigned place the checker it forms appears of a different shade. Crossing the yellow warp at the start of the square

the first checker is yellow, but in the next stripe, the warp being apple green, the yellow filling makes this checker look a greenish yellow. When it crosses into the jade green stripe the yellow thread gives this checker a yellow green look. The next color dyed in the filling is apple green. As it follows the yellow into the warp in the middle of the square and into the yellow stripe a Nile green checker is produced. On crossing the vertical middle stripe, being also apple green the color remains the same, but in the jade green stripe a bright emerald green is produced. In the third line of the square begins the jade dyed filling of the combination, weaving in the yellow warp a pea green, an olive green in the middle and a jade green in the last checker of the square.

Combination Yarn Dyeing

Dyeing combination colors on yarn is a matter of practice. Care and precision are very important in this work. The designer calculates the number of inches of a certain color or colors that are needed in the filling yarn, to obtain the combination for the plaid or checker desired. The dyers receive the skeins of the required length wound in a suitable manner. According to the combination wanted he measures the length to be dyed in the skeins and clamps or ties the several spaces for each of the colors to be put on them.

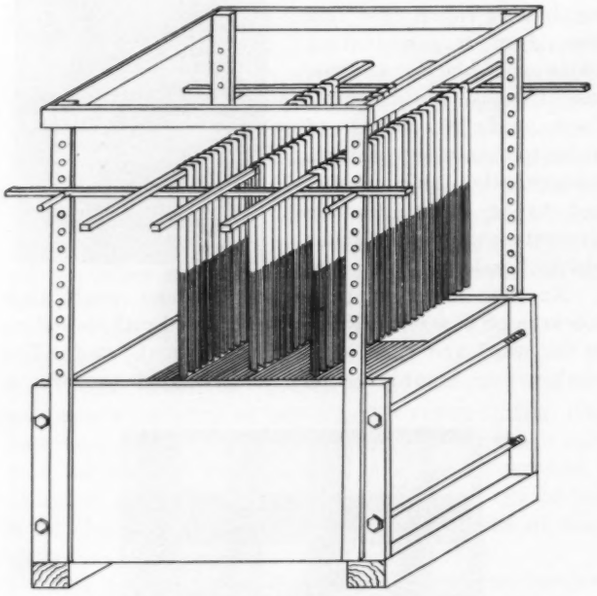


Fig. 5, a dyeing vat with attached frame holding the slats in position to be raised or lowered in the dye-bath as needed . . . . . .

The skeins are put on slats to be dyed. On each slat another, empty one, is placed over the yarn and the two slats tied together to prevent the skeins from sliding white in process of dyeing. When long skeins have to be handled, the portions of it that have to remain undyed, while dyeing another portion, can be tied above the slats, or placed in inclosure fastened above the slats to protect the yarn from being stained while processing the different colors.

Since only that portion of the skeins that has to be colored will be immersed in the dye bath at one time the vats, where combination dyeing is carried on, are provided with frames to hold the work above the bath. These frames, Fig. 5, fastened to the dye vats serve to hold the batch while it is prepared, to lower it and raise it on it as needed during the operations, to leave the dyeing on it to drain after each part of the skein is colored, to measure and lower the several portions of the skeins to be dyed in place, to be immersed in the dyeing bath in the order demanded in the combination. When the skeins are too long, the part to be dyed too unwieldy to be moved about comfortably in the dye-bath, that portion can be folded over bent rods, to keep them immersed and be moved back and forth in the bath until the conclusion of dyeing.

Ribbons of Chiffon Velvet

Ribbon of chiffon velvet is a ribbon in which silk is still used as an integral part of the fabric. Chiffon velvet is so called on account of the flimsy construction of the fabric. Silk in the gum is used as a background to hold the pile or surface face of the velvet because of its pliability, tenacity and tensile strength in the finest filaments. The silk frame in the warp and filling, and the rayon used for the velvet face of this ribbon are both dyed ingrain.

Like all velvet and plushes this fabric is covered with a fine soft nap on the face side of it, the reverse side being a strong, close tissue holding the pile of the nap in place. The nap is produced by adding, to the usual warp, additional rows of warp yarns which, when woven into the ground of the cloth, are raised over wires on the surface. A knife is then passed along a groove on top of each wire, to cut the threads for the pile and remove the wires.

Real velvet used to be made entirely of silk, but a kind called velveteen is made with a silk face and a cotton base, usually dyed or printed in the piece. Since rayon has found so much favor in the making of textiles it has been found quite an ideal fiber for pile fabric not only in ribbons but many kinds of velvets as well.

If I Were Foreman

Recognizing what management is up against today, there are several things that I should set out to do if I were a foreman.

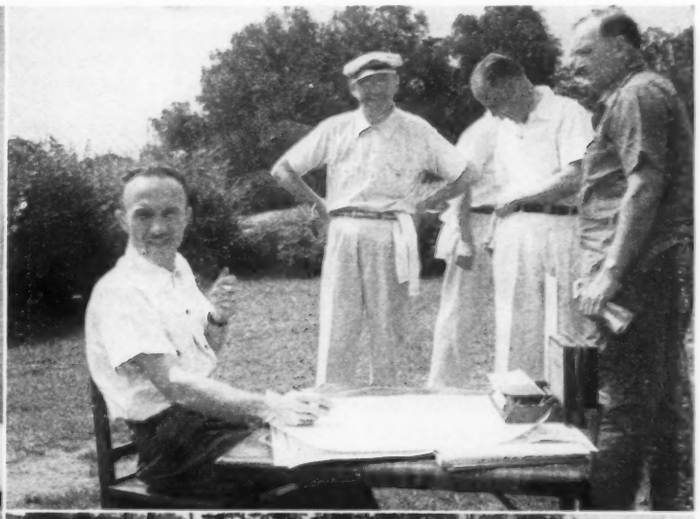
In the first place I should try to understand the problems that management is facing and then fit into their solution as helpfully as possible. Realizing how much management wants to keep selling prices down, I should be thrifty in the practice of economy in *every detail of my job.* I should deal with my men with extra care to avoid any cause for friction. I should do what I could to get my men to appreciate some of the difficult problems which management is up against, I should be more careful than ever to avoid waste of expensive material.

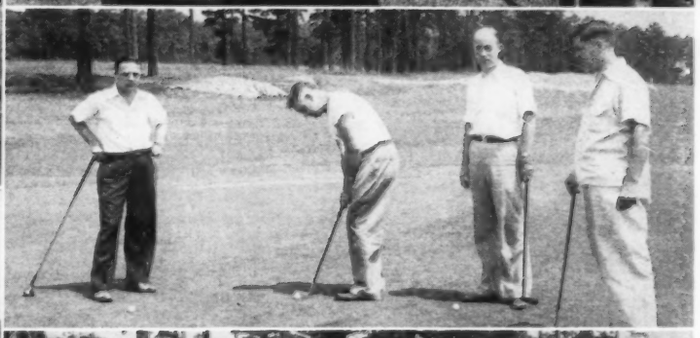
In a word, I should try to run my department or division of the business just as though it were a "business within a business". I should make my decisions in the light of conditions as they stand *today.* I should reckon the effect of *every decision* upon the *successful management* of my department.

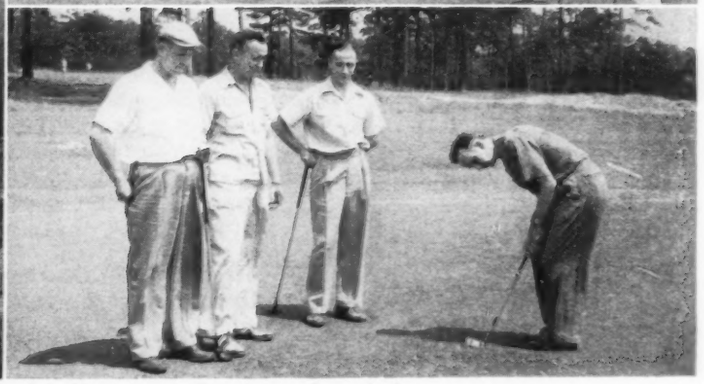
Go to the executive above you and ask him where you can "tune in" to help meet the *unusual conditions* which confront your company today.—"*Management Information*", *Elliott Service Co., Inc.*

Chemists and Colorists Gambol in Their Annual Outing on Lookout Mountain

MEMBERS OF the South Central Section of the American Association of Textile Chemists and Colorists and their guests enjoyed the section's annual outing at Lookout Mountain (Tenn.) Hotel, on August 2-3. There was no formal program, other than the banquet on the final evening; the week-end was devoted to sports, entertainment and goodfellowship. The attendance this year was the largest in the history of the occasion, more than 250 attending. Visitors came from the Southeastern, Piedmont and other sections of the society. An unusually large number of ladies attended.







Some informal shots at the Lookout Mountain outing on August 2-3. Top left, the four generalissimos: Standing, **Dan W. Torrence**, of Ciba Co., Inc., in charge of entertainment, and the chairman of the section, **Fletcher W. Kibler**. Seated, **William J. Kelly, Jr.**, of Burkart-Schier Chemical Co., in charge of publicity, and **Jack Anderson**, of Peerless Woolen Mills, who was general chairman of the outing, and banquet toastmaster. Lower left: **Dan Rion**, of National Oil Products Co., watching **Marvin Moore**, of Hosiery Processing Co., try for a ringer in the horseshoe pitching contest.

Some of the golfers. Top, **Nestor Groteluеschen**, of Magnet Mills, who was in charge of the golf tournament; **Malcolm Mackenzie**, of Sandoz, **Irving J.** Royce, of Royce Chemical Co.; and **C. S. Nash**, a guest.
Center foursome: **Frank F. Myers**, of Geigy Co., secretary of the section; **Bill Barnes, J. W. Cassell**, and **W. O. Goolsby**.
Bottom group: **J. C. Wyatt, Jr.**, of Crystal Springs Bleachery; **Charlie** (Walter Lippmann) **Cayce**, of General Dyestuff Corp.; **Fletcher Kibler**; and **C. Callaway, Jr.**, of Crystal Springs Bleachery.
Other sports, not pictured, included table tennis, badminton, contract bridge, dancing, bathing, etc., etc., etc., etc.

CURRENT TEXTILE TOPICS

Progress out of Dual Status

THIS MONTH marks an important stage in the situation for cotton manufacturers. It is another September fraught with significant conditions. A year ago it was the outbreak of war between Germany and the Allies. Now it is the national defense program, slowly gaining momentum through the summer and promising a rapid stimulation of our whole economy for months.

With domestic affairs dominant, the situation is one of transition from an anomalous and dual condition since the collapse of France in June. Constant fear that domestic economy would be upset in the event of sudden collapse by Great Britain under the German blitzkrieg held preparations for fall civilian trade in abeyance for week after week beginning in June and continuing through the summer.

Defense plans were the other phase of the dual condition, but these were at first a mere stop-gap partly offsetting the lag of civilian business. They gradually assumed more importance, as for instance in steel and construction with the semblance of a war boom in the highest August levels for a decade; also in the prospect seen by Secretary Hopkins of new record levels for trade and industry on expansion of employment and income under the defense program.

Cotton Goods Users Ignore Danger Signs

For most of the summer the consumers of gray cotton goods for civilian trade pursued a very conservative course. They were governed by the misgivings over Great Britain's power to withstand the German onslaughts and consequent fears that the fall business might be subnormal. The immediate outlook was paramount in consideration, notwithstanding danger signals ahead regarding supplies.

Such signals were definitely contained in the defense plans. The first direct effect upon cotton goods was in early orders for items like duck. Beyond that, preparations for spending billions of dollars were bound to involve large quantities of goods, both for industrial and civilian uses. The manifold uses of cotton in a broad economic movement of the country all are brought into play, relieving the highly competitive conditions of a restricted market.

Early plans of the defense program did not affect cotton manufacture to a serious extent, but the first of August found mill agents predicting heavy government buying of cotton textiles in the coming weeks. Consumers procrastinating in covering against civilian needs faced the likelihood of pressure on supplies in many kinds. It was trade opinion that the last quarter of this year would, with combined government and private business, put the industry back to the high levels of 1939.

Scarcity Threats In Civilian Lines

Buyers were deliberate in maintaining caution through the summer weeks, in the face of threatened scarcity to come because of consumption for government purposes, as well as the spread of demand for industrial and construction uses. But August brought larger inquiry and beginnings of broadened demand for the goods wanted in other civilian trade.

Early in that month a tentative demand, with substantial inquiry giving the sign, was manifest. Better retail demand for finished goods than that a year ago helped the situation. Issuing therefrom was a diminution of wholesale inventories which betokened replenishment needs in gray cottons. And while the all-around demand for goods created by the new economic position was improving the outlook for mills, it was tightening the supply situation for consumers of goods.

Dilatory tactics of the Reich in its attack on the British Isles, however, kept trade in a state of suspension for many weeks and the intensifying of the war toward the middle of August was another influence for delay in covering requirements in gray cloths. This was not so in the case of government goods and such buying logically was a factor to spur civilian trade. But buyers were loath to act, pending something definite.

Sharp Raw Cotton Contrasts in View

Beginnings of the defense program in June changed the mill outlook toward curtailment and the figures on cotton consumption for July by the government reflect an immediate broadening of activity, although the real forward movement of buying was still in the distance. The consumption in July of 597,850 bales compared with 556,529 for the month of June and 521,353 for the corresponding period of last year.

Extraordinary conditions in the raw staple bid fair to be intensified for some time. Exports on the one hand promise to be near record lows. On the other hand domestic consumption for the current season possibly will reach an all-time peak, surpassing the 7,950,000 bales of 1936-1937, which was approached by the 7,600,000 of the year ended on July 31, 1940. The objective of 10,000,000 bales a year which the Cotton-Textile Institute recently announced as a nation-wide program does not look so distant in view of the trend.

Increasing use of cotton, in the face of the keen competition of rayon for the textile trade of the country, emphasizes the exceptional value of the southern staple. As stated this summer by William C. Appleton, president of the American Viscose Corporation, the world textile trend is now definitely toward man-made fibers. Even in countries where there are ample supplies of natural fibers, the pronounced preference for rayon and other new textiles is indicated. Yet cotton goes on gaining!

New England Mill Situation

SUMMER business in fine cotton goods worked out substantially as expected for the New England mills in a general way. The fillip to business in coarse cloths at the start of August was not big enough to spread widely through the general market. It was not figured that combed goods would develop material activity before the middle of the month, although the approach of fall and underlying favorable circumstances in the domestic situation caused expectations of a quickening toward Labor Day.

Small quantities for immediate and nearby deliveries were the rule of business up to recent weeks. August brought some improvement as the movement of finished merchandise showed gains over that last year and the defense program promoted confidence in ultimate turnover, notwithstanding the attentuated blitzkrieg of Great Britain. A number of mills, incidentally, received contracts for broadcloths, lawns and other items for defense purposes.

Dislocations of commerce created a new outlet for some fine cotton cloths.

Several mills for some time have been active in developing cotton cloths as substitutes for high-priced linens that have become scarce. Cooperative steps have been taken by mills and finishers toward the production of suitable substitutes. It was found that such cooperation was essential so that constructions would obtain the luster characteristic of linens for table cloths and napkins.

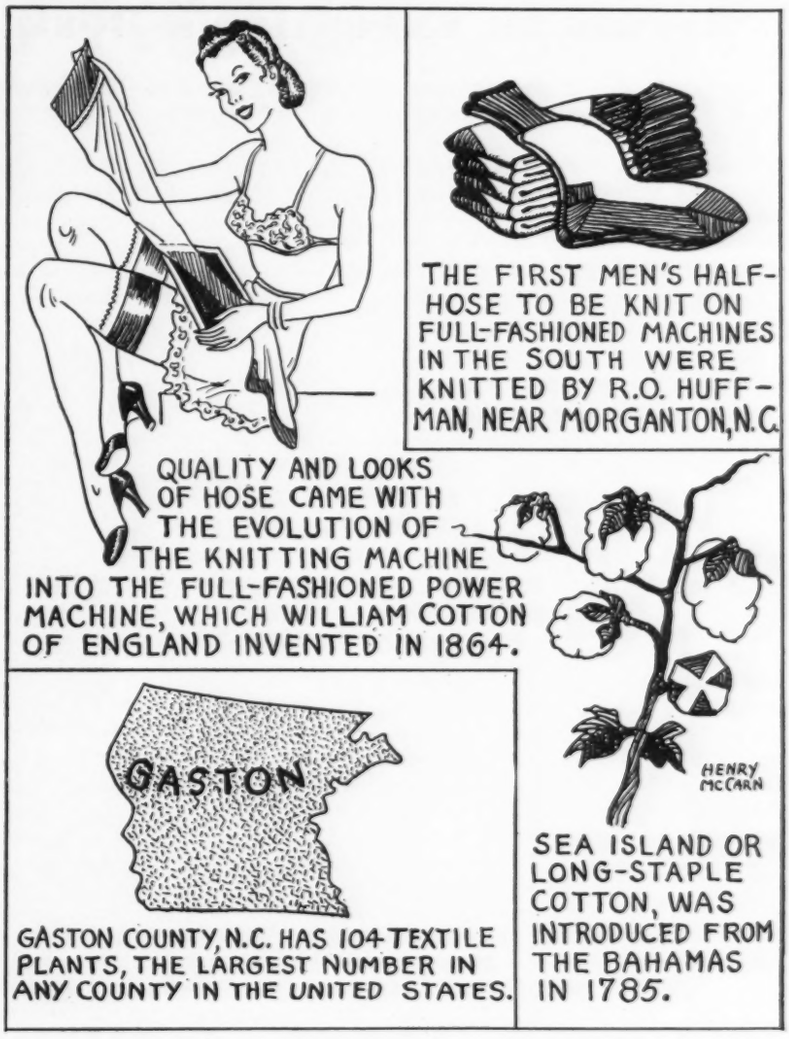
Cotton Consumption Behind 1939 Rate

Indicative of the careful adjustment by cotton manufacturers in this section is the lower volume of cotton consumption in 1940 than in 1939. The total for six months of 1940 is reported at 442,273 bales, which is 0.6 per cent less than the volume for the first half of last year. June showed 60,724 bales, which was 14.5 per cent less than in May and 16.3 per cent under the volume for June 1939.

Considerable variation among the various States is indicated, however, in the first half. Connecticut consumed 32,916 bales, against 30,236 in 1939, for a gain of 8.9 per cent. Massachusetts showed 227,384 against 214,007 bales, for a relative gain of 6.3 per cent.

New Hampshire made the worst showing, with 52,895 versus 65,631 bales, for a relative loss of 19.4 per cent. Rhode Island showed 53,076 against 56,833 bales, or a loss of 6.6 per cent; Maine, 72,964 against 73,729, or a loss of one per cent. Vermont lost 32.2 per cent, but is a small segment of the industry with consumption of 3,038 against 4,480 bales.

TEXTILE HIGHLIGHTS, by Henry McCarn


THE FIRST MEN'S HALF-HOSE TO BE KNIT ON FULL-FASHIONED MACHINES IN THE SOUTH WERE KNITTED BY R.O. HUFFMAN, NEAR MORGANTON, N.C.
QUALITY AND LOOKS OF HOSE CAME WITH THE EVOLUTION OF THE KNITTING MACHINE INTO THE FULL-FASHIONED POWER MACHINE, WHICH WILLIAM COTTON OF ENGLAND INVENTED IN 1864.
GASTON
GASTON COUNTY, N.C. HAS 104 TEXTILE PLANTS, THE LARGEST NUMBER IN ANY COUNTY IN THE UNITED STATES.
HENRY McCARN
SEA ISLAND OR LONG-STAPLE COTTON, WAS INTRODUCED FROM THE BAHAMAS IN 1785.

Slater Mill Anniversary

New England, in spite of its losses, prides itself in the cotton manufacture that it represents today and in the beginning of the national industry here. This is brought to the fore by the incidence of the 150th anniversary in 1940 of the founding of the Slater Mill in Pawtucket, Rhode Island, the cradle of the American cotton manufacturing industry. The anniversary will be observed by the National Association of Cotton Manufacturers at its annual meeting on October 9-10.

In addition to building the first successful cotton mill in this country, Samuel Slater is generally credited with being the pioneer in the introduction of factory methods. With the struggling states trying to adjust themselves as a nation, Slater found a way to independence from foreign countries in the direction of necessary supplies of cotton cloth.

To give outstanding recognition of this notable achievement in the nation's history, the northern organization of cotton manufacturers will have appropriate ceremonies at the shrine into which the old Slater Mill in Pawtucket has been turned. Russell T. Fisher, president of the N.A.C.M., will have general charge. Albert E. Noelte, president of the Old Slater Mill Association, is chairman of the arrangements committee. The Rhode Island Textile Association is cooperating.

Miscellany of the Mills

Recent announcement was made that the management of the Holliston Mills, Inc., was changed. This involves the East Braintree Finishing Co. and Holliston Mills in Massachusetts and the Holliston Mills of Tennessee. Book cloth, tag cloth, shade cloth and many other specialties are made. The properties embrace two bleacheries and three finishing mills. New officers are Harold E. Shaw, president; Thomas B. McCusker, treasurer and general manager; Charles V. Austin, vice-president and sales manager.

Notice of Merger

It has been announced by C. F. Dulken, president, American Textile Chemical & Engineering Corporation, Kearny, N. J., that American Textile Engineering, Inc., and its affiliated corporations have merged into a new organization known as Kearny Manufacturing Company, Inc., with offices and shops in Kearny, N. J., Greenville, S. C., Montreal, Que., Canada, and Sao Paulo, Brazil. John Klinck of Augusta, Ga., representative of Amtex for many years, will be manager of the Greenville, S. C., branch, assisted by Walter P. Rutley and Harold J. Hodge, both members of the technical staff. The opening of the Greenville shop will enable the company to render improved service to the company's customers in the South. The manufacturing program will comprise (1) Textile engineering division, featuring textile conditioning machinery and other textile auxiliary machines, (2) textile chemical division, featuring conditioning liquids and other textile chemicals.

"THE SITUATION" as seen Across an Executive's Desk

August 16, 1940

IT IS very hard indeed to write a review and prediction article on the general situation when the situation itself is apt to change over night. At this writing the blitzkrieg rages in England and there is only one thing certain—that the future of this country and the cotton textile industry hinges completely upon the outcome of the battle of Britain. In preparing this column, August, 1940, we feel like the mill executive who recently wrote a New York investment house: "Please cancel my subscription to your news letter and charts. We are sailing uncharted seas and I do not wish any charts to confuse my rudderless ship."

Activity in Mills and Markets

The market situation around August 1 was undergoing the usual mid-summer slump despite the large number of government orders. But an encouraging undertone was felt even then and the feeling was justified before the month end. During the entire month of July and well up into August mill activity was approximately 138 per cent of normal compared to 132 per cent a year ago. The cotton season which ended July 31, 1940, was a good one as far as mill consumption was concerned. The mills consumed in the 12 months from August 1, 1939, to August 1 of this year, 7,650,000 bales. This compares with 6, 860,000 bales the previous cotton year and a 10 year average consumption of 6,060,000 bales. The record year, 1936-37, consumed 7,950,000 bales.

Cotton authorities, basing estimates on recent trends and government efforts to widen outlets, forecast a record-breaking home consumption of 8,000,000 bales in the new season which opened August, 1940. Trade authorities based their forecast on the following trends:

(1) The high level of business and expanding employment. (2) The $10,000,000,000 defense program. (3) U. S. government attempts to stimulate the use of cotton by applying the stamp plan to cotton goods distribution, subsidizing export fabric sales and finding other outlets for the crop.

An 8,000,000 bale consumption at home this year would be no more than a bare life saver for the American cotton crop, however, unless export markets are reopened. Exports to Europe formerly took 25 per cent of the U. S. cotton crop. These markets today are closed and the prediction is for a 11½ million bale crop. If the U. S. mills consume the predicted 8,000,000 bales an additional surplus of 3½ million would still be left under present export conditions to be added to the government-held surplus now in existence. This surplus is approximately 9,000,000 bales at this time.

Announcement of the loan for 1940-41 was made immediately after the crop report. Under this loan program growers who planted within their acreage allotments may borrow from 9.16 cents to 9.9 cents per pound on 15/16-inch Middling cotton net weight basis. Compared with last year's minimum loan of 8.30 cents for Middling ⅞-inch gross weight basis the minimum this year will be 8.51 cents.

Early in August textile activity started picking up with a spectacular day on Worth Street when 40,000,000 yards of print cloth and carded broad cloth were sold. Prices strengthened immediately and held strongly. It was felt that practically all of that buying was for immediate use and would be repeated within a reasonable time.

Government Spending Aids Textiles

Following this print cloth spurt was an important government purchase of ducks when bids on 5,000,000 yards were opened. Other government purchases followed through — 5,800,000 yards for the army and approximately 16,000,000 yards for the WPA, with even cotton waste coming in the picture as bids were opened on 300,000 comforters. Purchases in such quantities by the government led market students to look for better business in every way as the defense program moves forward. As a matter of fact, on certain types of cotton goods the situation for deliveries is now very tight.

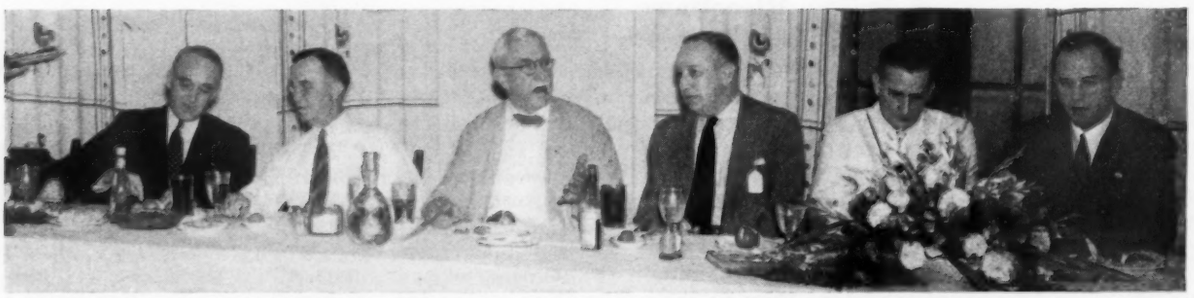
With an estimated minimum army of 2,000,000 soldiers, if the conscription bill goes through, which will have to be clothed and bedded, the demand for domestic items such as sheets, blankets, pillow cases, mattresses, and clothing such as shirts, underwear, uniforms, socks, handkerchiefs, etc. will be heavy. The cotton textile industry which expanded so spectacularly during and immediately after the last war will find itself able to take care of any government requirements as its facilities for production in a major effort are ample enough without additional equipment.

With the Courts

Two law suits which made the news this month are of special interest to the textile industry: (1) The Opp Cotton Mills, Inc., case, and (2) the Lane Cotton Mills case.

A writ of certiorari was filed in the supreme court August 13, 1940, by the Opp Cotton Mills, Inc., of Alabama. Seeking to set aside the wage order establishing 32½ cents an hour as the lowest wage which can legally be paid in the production of textiles for interstate commerce which went into effect October 24, 1939.

To review: The textile industry committee was appointed on September 13, 1938.



Representatives of the textile industry and allied fields participated in the second anniversary of the Tufted Bedspread Manufacturers Association at Dalton, Ga., the heart of this industry, on August 16. This view at the speakers' table at the banquet shows, left to right: George W. Henderson, manager of the factoring division of Trust Co. of Georgia, one of the convention speakers; A. J. Carter, of Carter Bros., treasurer of the association; W. D. Anderson, president of the Bibb Manufacturing Co., Macon, Ga., the featured banquet speaker; Fred R. Westcott, of Dalton, president of the association; J. K. Dickson, its secretary; and T. M Forbes, secretary of the Cotton Manufacturers Association of Georgia, Atlanta, who also spoke at the banquet.

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FOR ECONOMICAL PRODUCTION OF HIGH-SPEED LOCK-STITCHING

THE NEW SINGER 400W1, with the exclusive Double Rotary Thread Take-Up, was especially designed for continuous high-speed lock-stitching in light and medium-weight fabrics.

It was skillfully engineered for higher speed, easier operation, freedom from breakdowns, least possible vibration, thread economy, longer life, and firm accurate stitching.

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Donald M. Nelson, chairman of the executive committee of Sears Roebuck & Co., was appointed as a public member and chairman of the committee. The committee was comprised of 21 members, equally representative of the public, the employees and the employers in the industry. On May 22, after conducting meetings of the committee and the subcommittee and hearing from 60 witnesses, the committee recommended a minimum wage of 32½ cents an hour for the entire industry. This recommendation was made by the committee after a vote of 13 to 6 and was recorded in its favor. Four employer members of the committee, all manufacturers of cotton textiles, voted against it, as did two public members.

A public hearing on this recommendation was begun in Washington on June 19 before Elmer F. Andrews, then administrator of the wage and hour division. The hearing was continued on June 26 in Atlanta, Ga. and concluded after more than 100 witnesses and 3,000 pages of testimony were heard. The administration on September 29, 1939, approved the recommendation of the committee and issued a wage order putting the 32½ cent minimum rate for the textile industry into effect on October 24, 1939.

The Opp Cotton Mills, Inc., on October 20, 1939, filed with the United States court of appeals for the Fifth circuit at New Orleans, a petition to set aside the order. The action was brought under section 10 of the act ("court review") which provides that "any person aggrieved by an order of the administrator issued under Section 8 may obtain a review of such order in the circuit court of appeals of the United States for any circuit wherein such person resides or has his principal place of business, or in the United States Court of Appeals for the District of Columbia, by filing in such court within 60 days after the entry of such order, a written petition praying that the order of the administrator be modified or set aside in whole or in part."

The Opp petition challenging the constitutionality of the Fair Labor Standards Act contended that the wage-hour administrator should have granted mills in southern states a lower rate than those in other sections of the country in conformity with the provision for "prevailing wages and lower living costs".

The Lane Cotton Mills Co., fighting an injunction against them issued by the administrator of the Walsh-Healey Act, appealed to the Secretary of Labor to set aside the decision charging the Lane Company with violation of the Walsh-Healey Bill and recommendations that they pay $42,000 in back salaries and liquidated damages on account of the employment of under age employees.

The Lane Company has been engaged in manufacturing patterns for covering cotton bales under the government subsidy program to increase the use of cotton by wrapping cotton bales in cotton. One of the specific and important questions which this case will decide is where the line should be drawn between the manufacture of materials for the government and the furnishing of the materials for the government. The Lane Mills contend that in this particular case quantities of the material delivered to the government had been in the warehouse at the time the contracts were placed and were therefore furnished and not manufactured. They also denied that they knowingly employed any under age persons.

A private hearing of great public interest is now in session in Washington as the Senate Education and Labor Committee hold a series of secret sessions on proposed amendments to the Wagner Act. In these sessions witnesses representing only four policy groups were allowed: The American Federation of Labor, The C. I. O., The National Association of Manufacturers, and The Labor Board. From this hearing recommendations will go to the Senate as to the passage of either the House approved Smith Bill or the innocuous Norton Amendments.

What the Southern Mills Are Doing

Russell-Watkins Corporation, Greensboro, N. C., temporarily located in the building formerly occupied by the Bogle-Watkins Company, is endeavoring to find a larger building to house the firm until it can build its own plant. Additional machinery has been ordered which will be installed shortly and which will step up production and increase the operating force to 125 workers.

Drummondville (Que. Canada) Ltd., has announced a half million dollar expansion program at its plant. A new 2-story brick building will be erected to which the fish net division will be transferred. Cotton preparatory machinery and 12,000 spindles will be installed in the building vacated by the fish net division. Much obsolete machinery will be scrapped.

Southern Mills, Inc., Atlanta, Ga., have announced plans for the erection of a branch plant at Senoia, Ga. The building will be 100 x 150 feet and modern in every respect. Automobile seat cover fabrics will be manufactured and approximately 100 persons will be employed. C. H. Cleveland of Senoia has charge of the construction work.

Nelson Cotton Mills Company, Whitnel, N. C., are installing twelve 300-spindle Whitin twister frames in the No. 1 plant; twenty 300-spindle long draft spinning frames, two one-process slubbers, four roving frames and one one-process picker in the No. 2 plant. The company has also constructed an addition and made many improvements to the mill building.

The J. W. Sanders Cotton Mill, Meridian, Miss., may be re-opened in the near future, according to officials.

Virginia Mills, Inc., Swepsonville, N. C., have begun a $7,000 expansion program which includes an addition to the cloth room and additional office space.

La Francaise Dyeing & Finishing Company, Inc., has been organized and has taken over the plant and business formerly operated by the La Francaise Silk Dyeing & Finishing Company at 557 East 40th St. Joseph J. Riva and Licordino Di Petrillo are managing the new company.

A new pine pulp rayon process plant is reported to begin operations at Gastonia, N. C., under the name of Modena. It is understood that approximately 3,000 pounds of viscose fiber will be produced per day.

Carter Mills, Taylorsville, N. C., have been sold to C. L. Chandler of Gaffney, S. C. Mr. Chandler is vice-president and general manager of the Jackson Mills with plants at Wellford and Iva, S. C., and High Shoals, N. C.

North Georgia Processing Company, Inc., Toccoa, Ga., has recently completed installation of two conveyor systems that expedite handling of materials and goods. The mill has also purchased four new transport trucks.

Aragon-Baldwin Mills, Rock Hill, S. C., are reported to have purchased 400 new Draper looms and auxiliary equipment. A one story addition is being erected also.

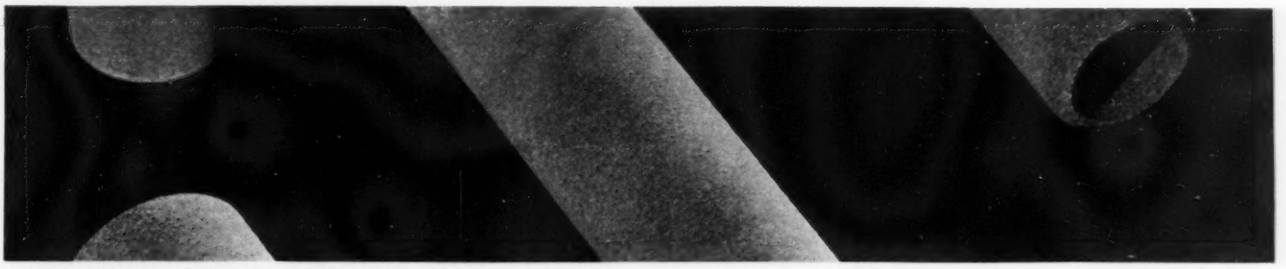
Springstein Unit of Springs Cotton Mills, Chester, S. C., is reported to have installed 40 cards and 24 new Whitin spinning frames in a newly constructed addition.

Merrimack Manufacturing Company, Huntsville, Ala., has begun a program for cleaning up and painting all buildings in the mill village.

Cramerton (N. C.) Mills is reported to be replacing 100 box looms with new Draper looms.

Representatives on Spinning Tapes

Byrd Miller, Woodside Bldg., Greenville, S. C., and A. C. Boyd, 1071 Bellevue Drive, N. E., Atlanta, Ga., are representatives of Roger W. Cutler, 141 Milk St., Boston, Mass., handling the Cutler Sak spinning and twister tape, and Greyhound thread which is made from nylon. Mr. Miller covers the Carolinas and Virginia, and Mr. Boyd covers Georgia, Alabama, and Tennessee. The Greyhound thread, made entirely from nylon, and on which the Cutler organization is exclusive distributor, was recently added to the line.



HERE'S WHY 8,500,000 ACTIVE SPINDLES ARE EQUIPPED WITH ARMSTRONG'S CORK COTS

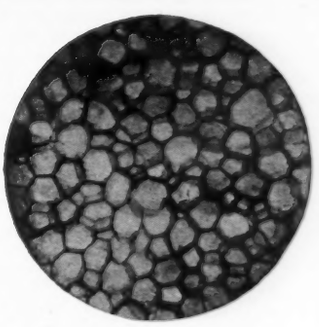
TODAY the trend to CORK, textile industry's *number one* roll covering material, is growing at a rapid rate. During 1939, mills representing a total spindlage of 1,500,000 made the decision to change over to Armstrong's Seamless Cork Cots . . . bringing the active total to more than 8,500,000. This trend is due to the outstanding advantages these cots offer.

Two major factors—ECONOMY and BETTER RUNNING WORK—have influenced the decision of the country's leading mills to switch to cork.

ECONOMY. Your economy with Armstrong's Cork Cots starts right away—with their quicker, cheaper assembly. And your savings continue, for cork gives longer wear because it's tougher. Furthermore, you can rebuff these cots—make them like new —*three or four times.* The cost of each rebuffing is about *half a cent a roll!*

BETTER RUNNING WORK. With Armstrong's Cork Cots you can actually produce *better yarn.* The higher coefficient of friction of these roll coverings assures a stronger, more uniform product. You get less eyebrowing and end breakage, less clearer waste, fewer top roll laps, and less trouble with hard ends. From *every* standpoint, cork gives better service!

ASK FOR PROOF. After changing over to cork, mills throughout the industry have reported savings of 50%—and more —on roll covering costs. Let an Armstrong man show you actual production figures of mills spinning your range of numbers on cork. Ask him to show you how *your* mill can reduce costs and boost quality by switching to cork. Write Armstrong Cork Co., Industrial Division, Textile Products Section, 923 Arch Street, Lancaster, Pa.



WHY CORK COTS HAVE LONGER LIFE

As this photomicrograph shows, cork consists of myriad tiny cells of entrapped still air. The cell walls are exceedingly thin —yet amazingly strong. By means of this remarkable formation, nature has endowed cork with many advantageous properties. One of these is extraordinary durability.

ARMSTRONG'S *Extra Cushion* SEAMLESS CORK COTS

CORK PRODUCTS SINCE 1860

COMMENT on the COTTON MARKET

New Orleans, August 15, 1940

THERE were many developments in the cotton market during the past month which under ordinary conditions would make for more trading. The trade had to record with the Wars in Europe, Asia and Africa.

In the goods markets there was improvement in the demand, weather conditions for the growing crop were less favorable, especially along the Atlantic and west Gulf coasts as result of heavy rains and destructive winds due to tropical storms, but the first official forecast for the season indicated a somewhat larger crop than generally expected, and the loan figure for the 1940 crop was apparently lower than generally anticipated.

Government Loan

The loan is on a basis of 9.16 cents, 15/16-inch staple, net weight, ranging up to 9.90 in the Carolinas and 9.80 at Gulf and Pacific ports. The shortest cotton to be acceptable this year will be, it is said 13/16-inch as compared with ¾-inch last year.

Indicated Crop

The government's forecast was for a production of 11,426,000 bales compared with 11,817,000 bales harvested last season. The average condition of the crop was placed at 72 per cent of normal against 74 per cent last year and 71 per cent for the ten year average. The yield per acre was set at 222.3 pounds as compared with 237.9 pounds last season and 198.1 for the ten year average. The acreage used in the report was 24,616,000 acres, allowing average abandonment, on 811,000 acres more than last season.

Exports—Past and Future

According to the New Orleans Cotton Exchange exports from the United States last season were 6,444,000 bales versus 3,619,000 bales the previous season. This was a marked improvement in shipments to foreign shores. But cotton experts in the Department of Agriculture predict a tobogganlike slide for foreign sales this season. They expect exports to drop below the 3,000,000 bale mark because countries to which the United States normally sells half its exports cannot be reached on account of the European War and the British blockade.

Only Britain and Japan Left

Only Great Britain and Japan remain as sizable customers, and neither is likely to buy heavily this season. Both have accumulated large reserves and are curtailing civilian consumption of cotton products.

The dark export prospects necessitated the federal program under which unexportable surpluses of this year's crop will be withdrawn from market channels and stored under government loans.

Government Loan Stocks

The United States at the close of last season had about $500,000,000 invested in 8,900,000 bales of surplus cotton stored under similar programs in previous years. A year ago loaned stocks totaled 11,250,000 bales. This reduction, which may be wiped out this season, came about as a result of the sharp increase in exports the past season. In other words, unless the European War comes to a close soon, loan stocks in the United States are likely to increase again and may be as large at the close of next July as they were at the close of July 1939 unless there be a further increase in U. S. consumption or unless the crop turns out much smaller than now expected.

Domestic Consumption Outlook

Last season's United States consumption of lint cotton—7,746,000 bales—was near record breaking proportions. This season, because of the nation's great defense program, consumption, it is thought, will increase further.

A favorable feature in this connection, something new, is the federal experiment to take surplus cotton out of warehouses and put it into homes of needy families in the form of clothes and household goods. Where tried, the plan is said to have been successful and is ready for widespread operation. It is cotton stamps—similar to food stamps, that are being distributed to relief clients, increasing their purchasing power for cotton goods 100 per cent. The cotton stamp plan has met with a favorable reception and is likely to be of much help in more ways than one by helping the poor, increasing consumption and helping to prevent an increase in the loan cotton surplus at the end of the season.

Progress of the Growing Crop

Substance of the government's crop summary for week ended August 13—"Although cotton was unfavorably affected by the excessive rains in the lower Mississippi Valley and ports of the southeast, the crop in general made satisfactory advance."

CENSUS REPORT—AUGUST 14, 1940

United States—Bales—	This Season	Last Season
Consumption of lint in cotton growing states, July	511,000	442,000
Consumption of lint in New England States, July	70,000	63,000
Consumption of lint in all other states, July	17,000	16,000
Consumption of lint in United States, July	598,000	521,000
Consumption of lint in cotton growing states, 12 months	6,611,000	5,810,000
Consumption of lint in New England states, 12 months	917,000	859,000
Consumption of lint in all other states, 12 months	218,000	189,000
Consumption of lint in United States, 12 months	7,746,000	6,858,000
Mills Stocks, July 31	974,000	862,000
Stock in public storage and at warehouses, July 31	9,122,000	11,620,000
Stock in mills, public storage and at warehouses, July 31	10,096,000	12,482,000
Stock in mills, public storage and at warehouses, June 30	10,732,000	12,969,000
Active spindles during July	21,916,000	21,939,000
Active spindles during June	21,942,000	21,771,000
Active spindles in cotton growing states in July	16,730,000	16,527,000
Active spindles in New England states in July	4,582,000	4,785,000
Active spindles in all other states in July	604,000	627,000

AMERICAN COTTON CONSOLIDATED MOVEMENT

August 1 to August 15	This Season	Last Season
Receipts at U. S. ports	134,000	162,000
Exports to Great Britain	24,000	25,000
Exports to France	———	11,000
Exports to Continent	5,000	52,000
Exports to Central and South America	———	1,000
Exports to Orient	3,000	9,000
Total Exports from the United States	32,000	98,000
Stock in New Orleans, August 15	543,000	352,000
Stock at all United States Ports, Aug. 15	2,494,000	2,012,000

Textile Industry Elects New Credit Committee

Chief executives of the textile industry met at the Royal York Hotel, Toronto, Canada, May 19-23 in conjunction with the First International and 45th Annual Credit Congress of the National Association of Credit Men. The Toronto sessions under the chairmanship of Nash S. Eldridge, J. P. Stevens & Co., Inc., New York, N. Y. included many interesting addresses and discussions on topics of direct importance to the Industry.

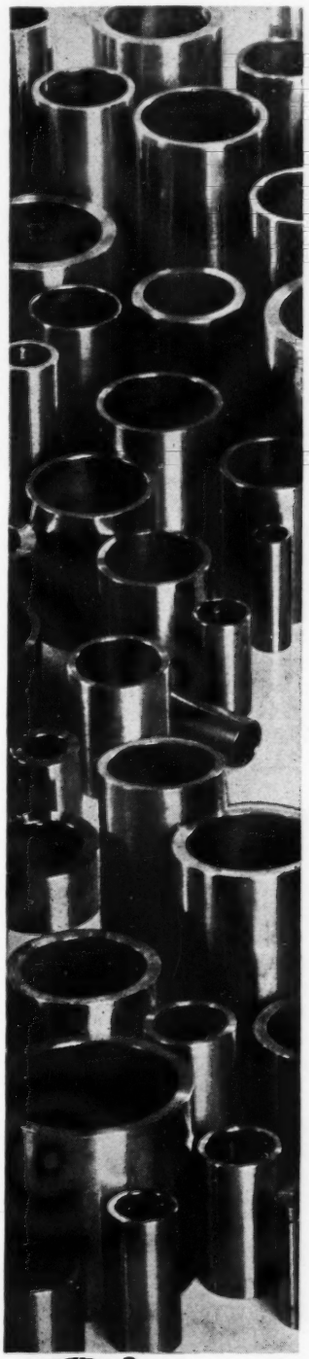
Newly elected officers who will have charge of activities during the coming year including the program at the New Orleans Credit Congress of the National Association of Credit Men in May, 1941, are: Ely R. Callaway, Callaway Mills, La Grange, Ga., chairman; Wm. G. Betsch, William Iselin & Co. Inc., New York, N. Y., vice-chairman and Arthur W. Macy, Indianapolis Glove Co., Indianapolis, Ind.; A. J. Pischel, Joshua L. Baily Co., New York, N. Y.; and C. Callaway, Jr., Crystal Springs Bleachery, Inc., Chickamauga, Ga.

Chairman Callaway has available a number of copies of the Minutes of the Toronto Sessions which he will be glad to send to anyone in the Industry on request.

Book on Fire Prevention and Control

Harold Joe Davis, 3927 East Admiral Place, Tulsa, Okla., has recently published a booklet on the causes of fire, its prevention and control, which fills a need for up-to-date usable material of this nature. The booklet sells for 25 cents per copy postpaid.

Avoid Delay



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NEW EQUIPMENT and MATERIALS

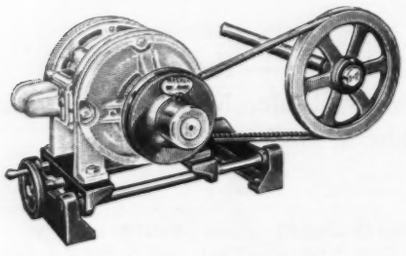
Normal Primary Alcohols

E. I. Du Pont de Nemours & Co., Inc., Fine Chemicals Division, Wilmington, Del., have announced two normal primary alcohols, normal octanol and normal decanol. They are said to be good anti-foaming agents and provide a means of introducing octyl and decyl groups for chemical manufacture. They may be used as mixed solvents for the extraction of fats and oils. Both alcohols have very low solubility in water but abate foam effectively within the solubility limits, 0.01 per cent to 0.05 per cent. Normal decanol has a bland odor.

◆

Vari-Speed Jr.

Reeves Pulley Company, Columbus, Ind., has announced the addition of the Vari-Speed Jr. to its complete line of variable speed control equipment. By means of this low-cost unit any standard constant speed motor of from fractional to 1½ hp is easily and inexpensively converted into a variable speed unit to provide complete speed



adjustability for the machine it drives. No special shaft extension is required. The Vari-Speed Jr. as standardly furnished comprises a disc assembly and adjustable motor base. The disc assembly consists of two cone-shaped discs (one stationary and one laterally adjustable), a self-adjusting tension spring, a spring adjusting nut and cover. The assembly is applied directly to the standard shaft extension of the motor and the motor is mounted on an adjustable base. The V-belt, driving between the two discs, and the sheave pulley on the driven shaft, is a standard Section A or B belt, and may be secured from any industrial supply house. The motor is moved forward and backward by an adjusting handwheel. The Vari-Speed Jr. is built in six different sizes of disc assembly for use with motors of from ⅛ to 1½ hp and provides speed control over a range of from 1¾ : 1 to ¾ : 1.

◆

3-Roll Calender For Rayons

H. W. Butterworth & Sons Co., Philadelphia, Pa., have developed a new 80-ton 3-roll hydraulic calender for rayon goods. It is driven by a 30-hp. two-speed geared motor mounted on a gear reduction unit capable of standing loads or reducing speed instantly. It drives from the reducer to the top roll by roller chain. Cloth speed is 80 to 40 yards a minute. The top roll is chilled iron, 15-inch diameter, steam heated; the middle roll is cotton, 22-inch diameter; the bottom roll is chilled iron, 17-inch diameter, steam heated. Top and bottom roll bearings have an oil circulating and cooling system.

The new calender has a new style balanced let-off, molded fiber 3-bar adjustable tension device, rolls mounted in heavy duty roller bearings, special slip belt winder with clutch, streamlined hydraulic pump fully enclosed, new style accumulator with safety switches, and special valves for control of hydraulic equipment.

Bar Rubber Expander Stretches Cloth

Birch Brothers, 32 Kent St., Somerville, Mass., has recently brought out a new single curved bar rubber expander for the stretching of cloth before such machines as mangles, printing machines, dye jigs, dry cans, etc. It is said to be an improvement over the old expander in that the thickness of the rubber is considerably greater, giving better stretch and longer life. The expander is fitted with an improved type of bushing which is trouble-free.

◆

Loose Pulley Oiler

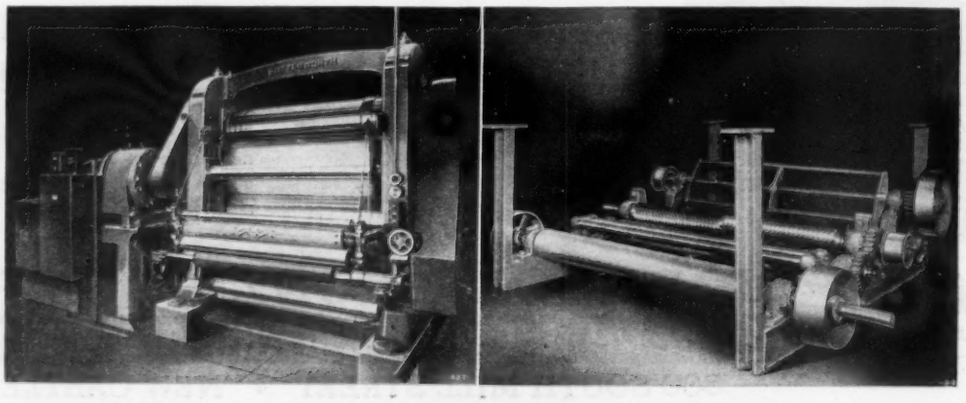
Trico Fuse Manufacturing Company, 2948 North 5th St., Milwaukee, Wis., has announced a new, visible, unbreakable loose pulley oiler for slow and high speed applications without flooding. The oiler is intended to replace common grease or oil cups.

◆

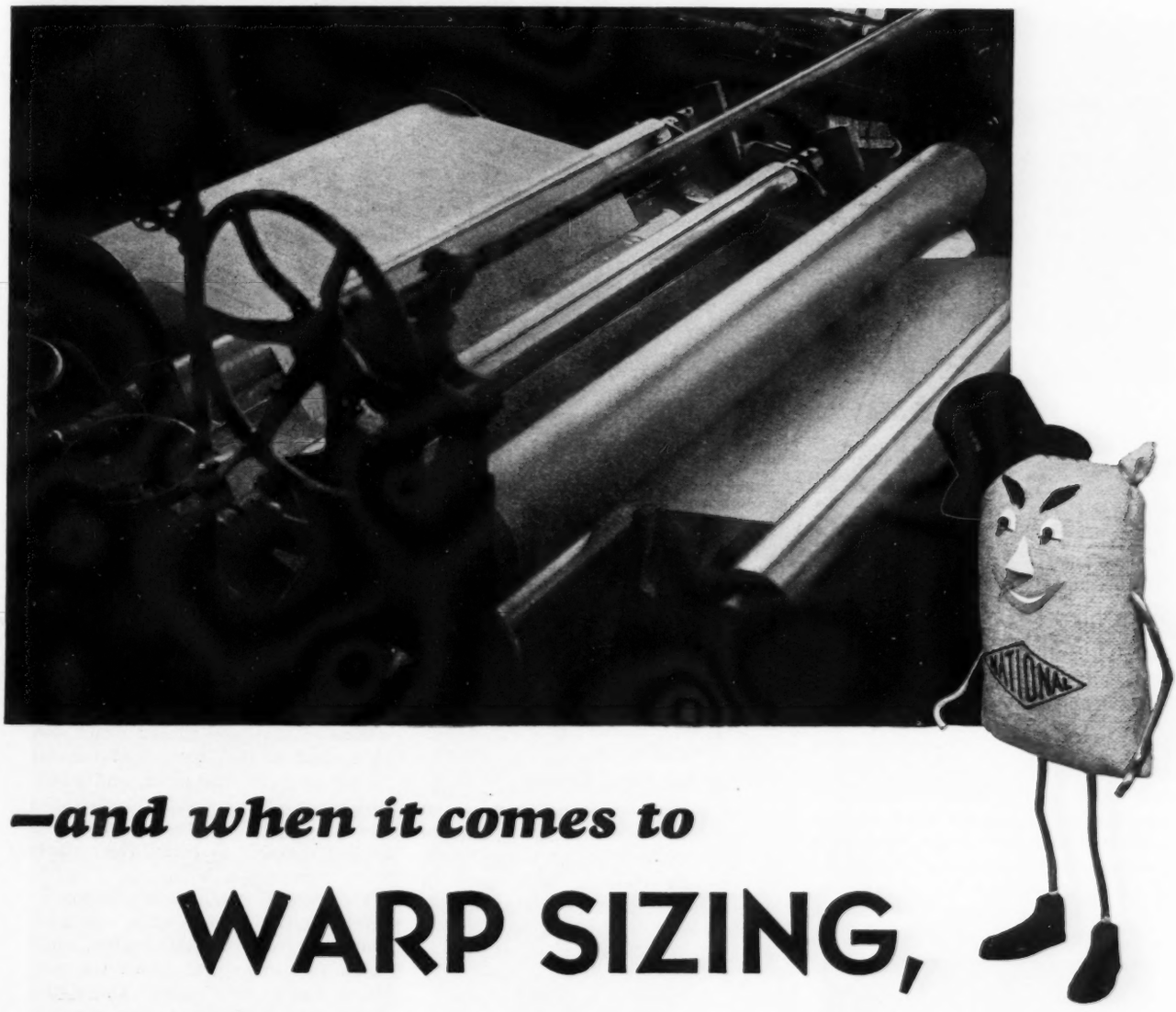
New Scutcher for Fabrics Up to 60 In. Wide

A new design light scutcher, known as Type S, has been announced by H. W. Butterworth & Sons Co., Philadelphia, Pa. It is made for 40-, 50-, and 60-inch fabrics. The beater bars are of high grade phospor bronze tubing welded to bronze heads. Scroll rolls are milled from heavy wall brass tubing by a special Butterworth process. There are no soldered or riveted strips to come loose with resulting damage to cloth or operator.

Governor bars are of brass tubing mounted on a rugged cast brass frame pivoted on ball thrust bearings and balanced for sensitive operation. Brass tube delivery roll is mounted on self-aligning ball bearings. Top roll is available if desired. Beater bars and scroll rolls are mounted in self-aligning ball bearings equipped with grease seals and driven by cut cast iron and Micarta spur gears. Cast iron vertical supports for ceiling mounting are furnished to specification.



At the right are seen the two new finishing machines just announced by Butterworth. On the left in the illustration is the three-roll calender for rayon goods; the other picture is of the new Type S new design light scutcher . . . . . .



—and when it comes to

WARP SIZING,

National can give you real help!

WHETHER it's special sizes for Spun Rayon and Filament Rayon, or pearl and thin-boiling starches for Cottons, we can not only furnish the right products but show you how to use them to best advantage.

Our Textile Chemists can help you obtain the results you want. Their services are at your disposal.

NATIONAL STARCH PRODUCTS Inc.

820 GREENWICH STREET, NEW YORK

The above unit for unwinding jack spools is known as a free wheel jack spool creel. The yarn surfaces of the spools ride on rubber tires and all the tires are interconnected with chain and sprockets and a free wheel clutch connects the tires to the dressing frame or warper. Each spool has the same tension whether full or empty. No paddles or weights are required and there is no over-run of the spools. When the dressing frame stops the spools stop through the action of the free wheel clutch. It is said that with this new system it is possible to wind from jack spools at as high speeds as winding from packages. The unit is built by Sjostrom Machine Co., Laurence, Mass.

The "Superior" Cleaner

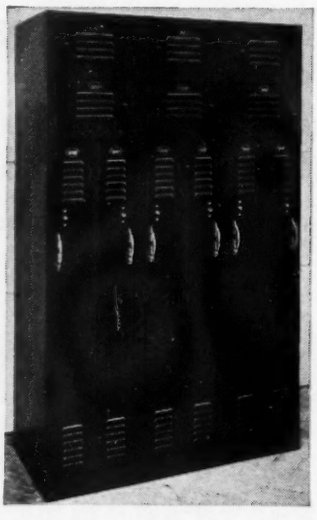
The Centrif-Air Machine Company, Atlanta, Ga., has introduced the "Superior" cleaner, a machine which is built to operate as a complete independent unit following bale openers and blending hoppers, or to supplement Centri-Air cleaners, vertical openers, Buckley beaters, lattice openers, Platt openers, gyrators, downstroke cleaners, etc., This new machine employs mechanical and centrifugal force to open the cotton and remove the light trash and then centrifugal force, gravity and air to take out the heavy particles. Cotton is moved through it by beaters,

which open the stock and pass it over the corrugated cleaning screens and grids to the delivery end. The stock slows down in its forward travel from one beater cylinder to the next, so is progressively opened and cleaned by the individual cylinders. It can be adjusted so that hard materials leave the cleaner proper below the cotton and at greater velocity. The unit is said to open, clean and convey cotton and rayon staple fiber without rolling, curling, nipping, stringing or breaking the staple; removes all foreign matter. The complete unit occupies 3 x 12-feet floor space and is driven with a 3 hp. motor, handling up to 1500 pounds of stock an hour. Steel construction throughout, the beaters are oval and the individual cylinders are driven with sprockets and roller chain. Ball bearings are left open for convenient lubrication.

◆

Two-in-One Steel Locker

Penn Metal Corporation of Penn., 36 Oregon Ave., Philadelphia, Pa., has designed a two-in-one steel locker which cuts usually required floor space in half. It is designed for use in cramped quarters or any installation where a saving in floor space is an important consideration. The lockers are fabri



cated from first-grade, heavy gauge furniture steel to prevent sagging or warping. Each locker is 15 inches wide, 21-inches deep and 73½-inches high, including a 1½-inch base, and is divided into two coat compartments. Flat key locks are furnished for each coat compartment door. When opened, it automatically unlocks a hat compartment.

◆

New Warwick Detergent

Warwick Chemical Co., West Warwick, R. I., has announced the development of a new detergent, known as Sulfanole K, for use in scouring, boiling off, dyeing of piece goods, raw stock, hosiery, silk and rayon and cotton and wool. It is said to be more effective because of thorough wetting and penetrating properties, and that less of the material is required. It is immune to hard water, alkali or acids, preventing the formation of lime soaps and similar problems.

◆

New Rubber, Synthetic Rubber Compounds Have High Electrical Conductivity.

Specialized compounds of natural rubber and synthetic rubber with a high degree of electrical conductivity have been recently developed by its laboratory research chemists, it is announced by The B. F. Goodrich Company, Akron, Ohio. The company also announces that it can now furnish solutions of synthetic rubber which can be applied to the surfaces of natural rubber products like paint, and which will carry away static. This material has already had successful application as belt dressing to carry away static from transmission belts.

Electrically conductive compounds can generally be made softer and more "rubbery" from synthetic rubber, while in the case of natural rubber the compound has to be "loaded" and consequently is stiffer and less yielding. Natural rubber, unless specially compounded has the highest electrical resistance of any solid material. For conducting static a certain amount of resistance is desirable, since it prevents sparking, and the specialized compounds, both in synthetic and natural rubber allow the amount of resistance needed to remain in the material.

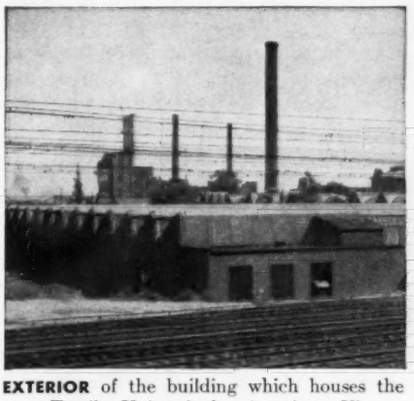
◆

Cotton Conditioner

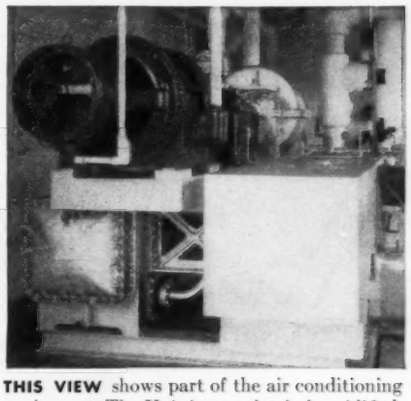
The Borne Scrymser Company, 17 Battery Place, New York City, has announced Meon T for conditioning cotton yarns where it is desired to set the twist and remove the kinks for smooth weaving. It is said that the cellulose in cotton yields to an essential ingredient in the new product and the regain can be fixed high or low, depending on the amount of moisture wanted. Whether the moisture is high or low, the yarn remains limp and without k i n k s and the breaking strength is decidedly increased when Meon T is used on the yarn, according to the company.

Meeting Your Problems

...BEFORE THEY ARISE

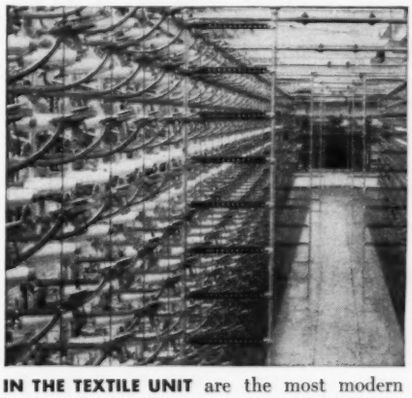


EXTERIOR of the building which houses the new Textile Unit of the American Viscose Corporation.

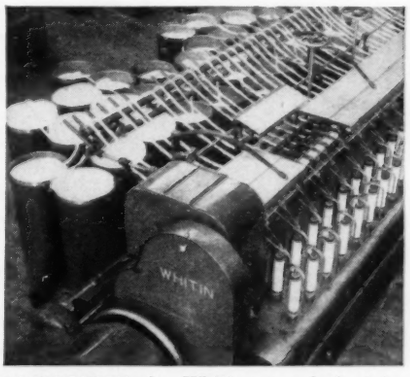


THIS VIEW shows part of the air conditioning equipment. The Unit is completely humidified.

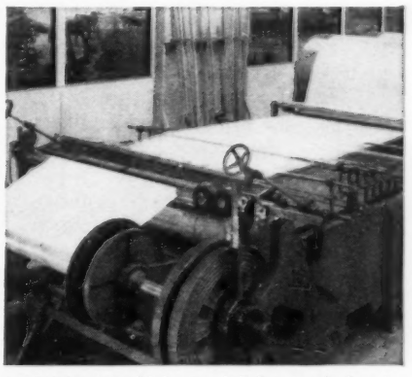
ONE OF THE single-unit Wildman full-fashioned hosiery knitting machines, set up in the Textile Unit.



IN THE TEXTILE UNIT are the most modern types of mill machinery—such as this 1000-end Sipp Eastwood magazine creel.



PHOTOGRAPH of a Whitin super-draft slubber running on Fibro. Exact conditions of the average mill operation are closely approximated.



A SEVEN-CAN high speed Johnson slasher in use in the American Viscose Corporation's new Textile Unit.

A mill operator today is almost ceaselessly engaged in coping with the problems immediately surrounding him.

Like the captain of a ship, he is too busy at the helm to run up to the crow's nest and take a look around the horizon. He must depend on someone else to do that for him.

Following its policy of pioneering in the rayon industry, the American Viscose Corporation takes this occasion to announce the establishment of just such a "crow's nest"... a new Textile Unit, now in operation at Marcus Hook, Pa., in connection with our plants and laboratories there.

In this Textile Unit, self-contained in its own building and comprising 60,000 square feet of floor space, all mill conditions common to the manufacture of rayon products *are closely approximated*. Day after day, in actual working conditions, problems which arise to confront you, arise here.

And as soon as they arise, the vast resources of the American Viscose Corporation are mobilized to find a way to solve them ... to find the cheapest and most efficacious way to overcome them ... to find a way which *you* can make use of in your own mill.

Not only is this Textile Unit concerned with the solution of everyday problems—it is also concerned with discovery, with the finding of new and better ways of doing things, with the uncovering of new avenues for profit for the whole industry.

The Unit is at present engaged in activities relating to the development of new fabrics, the solution of many dyeing and finishing problems, and the maintenance of quality in construction.

We hope you will consider this a cordial invitation to see and inspect this "crow's nest" of the rayon industry.

Copr. 1940 American Viscose Corp.

AMERICAN VISCOSE CORPORATION *Lustre-Fibres, Ltd.*, SELLING AGENTS • *350 Fifth Avenue, New York City*
THE WORLD'S LARGEST PRODUCER OF RAYON YARN

THE FIRST NAME IN RAYON . . . THE FIRST IN TESTED QUALITY

Rayon on Headless Package Twister

Atlantic Rayon Corporation, 86 Crary St., Providence, R. I., is offering to the textile trade the product of the company's new headless package twisting installation, which is designed to be helpful in the manufacture of all extra twisted single synthetic yarns (with the exception of full crepe twist) and numerous plied yarns including the standard combinations of viscose process crepe twist plied with acetate yarn, numbers like lace twist, selvage yarn and spun rayon and filament acetate twists. It supplies the finished twist on tubes instead of on small spools with heads. The twist is in many cases made without the use of flyers, tending to reduce damaged yarn. It produces a package running in some cases as large as 24 ounces and containing very few knots. The package lends itself readily to a thorough inspection on the outside and across the ends. Extra operation of redrawing yarn to a shipping container is eliminated. The yarn can be run at high speed for warps on the automatic overend type creel, reducing the cost of warping.

◆

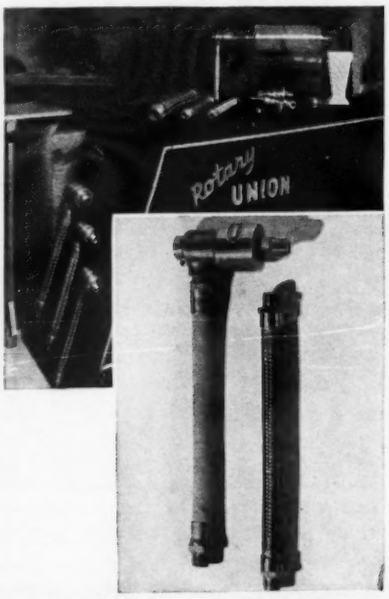
Roving Frame Knock-Off and New Draw Box for Combers

The July issue of "The Saco-Lowell Bulletin" describes two mechanical devices, one each for roving frames and combers, which should be of interest to textile men. A spring-actuated assembly has been designed for use on roving frames to improve the operation of the full-bobbin knock-off. The assembly consists of only one lever, three studs and a spring. The handle is mounted on a large stud fastened to the back of the roller beam. One end of a tension spring is fastened to the lower end of this handle, the other being anchored to the No. 4 samson by means of an adjusting nut and screw, which allow the tension of the spring to be varied to meet different conditions. When the set of bobbins is completed, the wedge on the cone rack raises the latch so that the spring, with its tension released, can bring the upper end of the handle in contact with the stop on the shifter rod with sufficient force to place it in position to stop the frame. The assembly is supplied on new frames and can be applied to existing installations, with the exception of frames equipped with the Type N full-bobbin stop motion.

The 4-roll draw box for combers is so arranged that the rolls can be set for cotton ranging from 15/16-inch and waste extraction as low as 3 or 4 per cent to 2-inch cotton with a waste extraction as high as 25 per cent. Drafts can be secured from 665 to 1227.

Rotary Union to Solve Friction Problem

Perfecting Service Corporation, Chicago, Ill., has made available a new improved rotary union for use wherever a gas or liquid line must be connected to a revolving shaft, roll or



drum. The new union features low friction performance and is especially designed for web-driven rollers. The low friction feature is said to make mechanical drives unnecessary; in addition the rotary union provides leakproof, maintenance-free service and longer life. Available in two types, the standard and the heavy duty union.

◆

Geared-Type Limit Switch

General Electric Company, Schenectady, N. Y., has announced a new small-size geared-type limit switch for application on motor-driven devices where it is necessary to limit the rotation of the motor shaft or some rotating shaft or gear on the driven machine.

In use, the shaft of the switch serves as a driving gear, causing the pinion shaft to turn. The pinion shaft engages the driving gears which move along the drive screw toward one of the operating gears at either end, depending on the way they are turned by rotation of the pinion shaft.

◆

Oil Soluble Fugitive Tints

The United States Testing Company, Hoboken, N. J., has made available a line of oil soluble fugitive tints for identifying cotton, viscose and acetate staple fibers. These Cumol tints are oil soluble dye concentrates to be added to the oil used in conditioning cut staple fibers; they are applied directly to the stock without the use of any water, thereby eliminating delays encountered in drying out the stock.

Finish for Wooden Rails on Harness Frames

Steel Heddle Manufacturing Company, Philadelphia, Pa., has introduced a new finish for the wooden rails on harness frames, termed Gold Seal Waterproof Finish. This new application, which is used in all the company's frames fitted with spruce, pine or other kinds of lumber, grants an absolutely smooth wax-like surface of the lumber, preventing lint or other adhesive substances from clinging to the harness shafts, with the result that daily brushing or cleaning of the loom harness is eliminated to a great extent. It also makes the wooden parts immune to the detrimental effects of weave room moisture.

◆

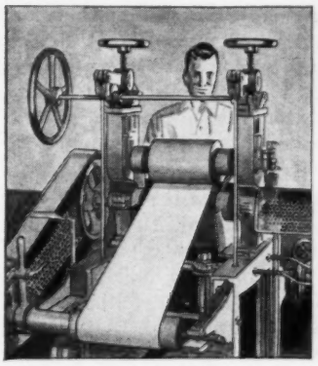
Floor Finishing System

A system of treating both new and old mill floors, permitting the mill to keep its floors cleaner and more sanitary, and minimizing the necessity of scrubbing, has been developed by E. I. du Pont de Nemours & Co. It is the result of several years of research and has been proven to be thoroughly practical. It is described as a Penetrating Floor Finish which penetrates the surface, hardens the wood, and seals the pores, holding the oil and dirt on the surface where it can be removed with an ordinary brush broom and mop. The system, it is explained, does not provide a surface film to wear away as its penetrating and hardening action enables the wear to be taken up by the floor itself. Its durability varies according to the amount of traffic on the floor. Near the doors and in alleys, where traffic is heaviest, it is pointed out that an additional coat may be required in from six to nine months; but each re-coating makes for better durability. The manufacturers point out that the finish is inexpensive to apply, and that the advantages include easier cleaning methods, elimination of scrubbing with soap and water, and improved sanitation.

◆

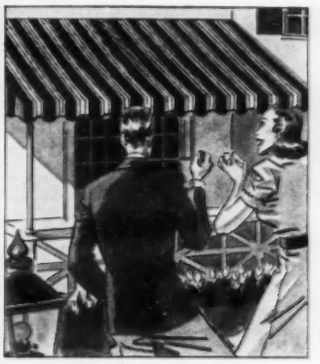
Pump Mount Motor

Sterling Electric Motors, Inc., Los Angeles, Cal., has developed a new line of motors with standard dimensions designed for the easy mounting of centrifugal and similar pumps. The motors are all ball-bearing of ratings from ½ hp to 40 hp inclusive for operation on 3 phase at 2, 4 and 6 pole speeds. The extended shafts and machined fittings for the pump mounting are all standard and the same dimensions throughout the entire range of ratings. In the design of this unit particular attention has been given to its ruggedness so as to prevent any misalignment of the packing, bearings, etc., caused by stains on installation of pipes, fittings, etc.



EASY TO APPLY

NO LOSS OF TENSILE STRENGTH



CUSTOMER SATISFACTION

CHEAP TO BUY

FOR GREATER *Protection* OF *Canvas* PRODUCTS

NAPENIZE

THE POSITIVE ANTI-MILDEW TREATMENT

To NAPENIZE* canvas products is to give them positive anti-mildew protection with a new treatment developed by The Dow Chemical Company. This treatment assures protection of a greater degree of permanence than was hitherto possible, hence far longer life for the products treated.

The greater degree of permanence is the result of physical affinity. When you NAPENIZE, no waterproofing is required to retain the effectiveness of the treatment during exposure to the elements.

Because it is low in cost and easy to apply this new treatment is of interest to all manufacturers of canvas products. For more complete information write

*Patent Applied For

DOW THE DOW CHEMICAL COMPANY, MIDLAND, MICHIGAN

Branch Sales Offices: New York, St. Louis, Chicago, San Francisco, Los Angeles, Seattle.

TIMELY NEWS ITEMS with a TEXTILE SLANT

Lustre Fibers, Ltd., selling agents for American Viscose Corporation, announce the following additions to sales personnel at the company's New York offices: J. A. Webber, formerly of the sales development department, Marcus Hook, Pa., who will work with Wm. D. Benson, division manager; T. H. Andrews, member of sales staff of Philadelphia office since 1934, to the Vinyon sales department to work with W. G. Luttage, division manager; and Eldon Stowell of the sales development department, to the acetate sales division to work with G. L. Storm, division manager.

The Mercer Awards, semester scholarships in Oberlin College given by Col. A. L. Mercer, president, Cowles Detergent Company, Cleveland, have been awarded to Richard Hirschberg in the senior classification and Virginia Cole in the junior classification. The awards are given for the best essays on some phase of economic stabilization and some phase of economics having to do with world peace.

American Viscose Corporation has opened a rayon exhibit to the public at its Front Royal, Va., plant, which depicts the story of rayon from the first steps of manufacture to the finished fabric.

TelAutograph Corporation, 16 W. 61st St., New York City, in expanding their industrial business, has appointed J. Read Abrams of Atlanta, Ga., as their representative for Georgia, Alabama, and Tennessee and part of Florida; he makes his headquarters at 901 William Oliver Building. S. S. Dewson, who covers the textile field generally, works out of the Atlanta office. Both men have had experience in the field of time clocks, communicating systems, etc.

James H. Jewell, formerly assistant manager of the agency sales department of Westinghouse Electric & Manufacturing Company, East Pittsburgh, has been appointed manager of agency sales. This department is responsible for the company's apparatus products sold through distributors.

Donald J. Carmouche has been placed in charge of textile sales and research in the Southeastern states territory of The Celotex Corporation, Chicago, Ill. He is making his headquarters at 2146 McClintock Road, Charlotte, N. C. Mr. Carmouche has been associated with Celotex since 1925.

Cowles Detergent Company, Cleveland, Ohio has moved its general offices to 7016 Euclid Ave., Cleveland in order to have more space, needed because of an expansion program.

William A. Boyd has retired as manager of the Providence office of Stein, Hall & Company, Inc., manufacturers and distributors of starches, gums and dextrines, after 37 years of service with the company. He is succeeded by Joseph A. King, who has been with the Providence office for several years. Jesse Fraser, formerly connected with several New England finishing plants, has joined the Providence sales staff. William S. Newell has been transferred from the Providence office to cover the Maine territory under the direction of R. D. Armstrong, Boston branch manager. George H. Norton has taken over most of the textile territory Mr. Newell covered out of Providence.

The importance of rayon as a luxury fabric is emphasized in the fall and holiday lines of men's indoor apparel. This probe, made by Robhor Robe Company of crown tested rayon fabric, has collars and cuffs of satin and the body fabric is satin striped rayon. Courtesy, American Viscose Corp.

Walter C. Davis will represent the Tolhurst Centrifugal Division and DeBothezat Ventilating Equipment Division of American Machine and Metals, Inc., East Moline, Ill., in the Maryland, Virginia, and District of Columbus territory. He is a graduate of the University of Tennessee and was formerly associated with DuPont and General Chemical Company. His headquarters will be in Baltimore.

A. B. Nixon, director and formerly general manager of the Naval Stores Department of Hercules Powder Company, Inc., has been elected vice-president and member of the executive committee, succeeding G. G. Rheuby, vice-president and director of Hercules. A. E. Forster, formerly assistant general manager of the Naval Stores Department, was appointed general manager, succeeding Mr. Nixon.

H. T. Nelson has been transferred from the Chicago office of Continental-Diamond Fibre Company to the Spartanburg, S. C., office, and will cover the entire southern territory of the company.

F. C. Todd, Inc., Gastonia, N. C., have been appointed southern agents for Whitin Leather & Belting Company, 3030 Northern Boulevard, Long Island City, N. Y.

Frank F. Fuller, since 1937 vice-president and director of Borne Scrymser Company, manufacturers of technical oils, has resigned his position. His plans for the future have not been made known.

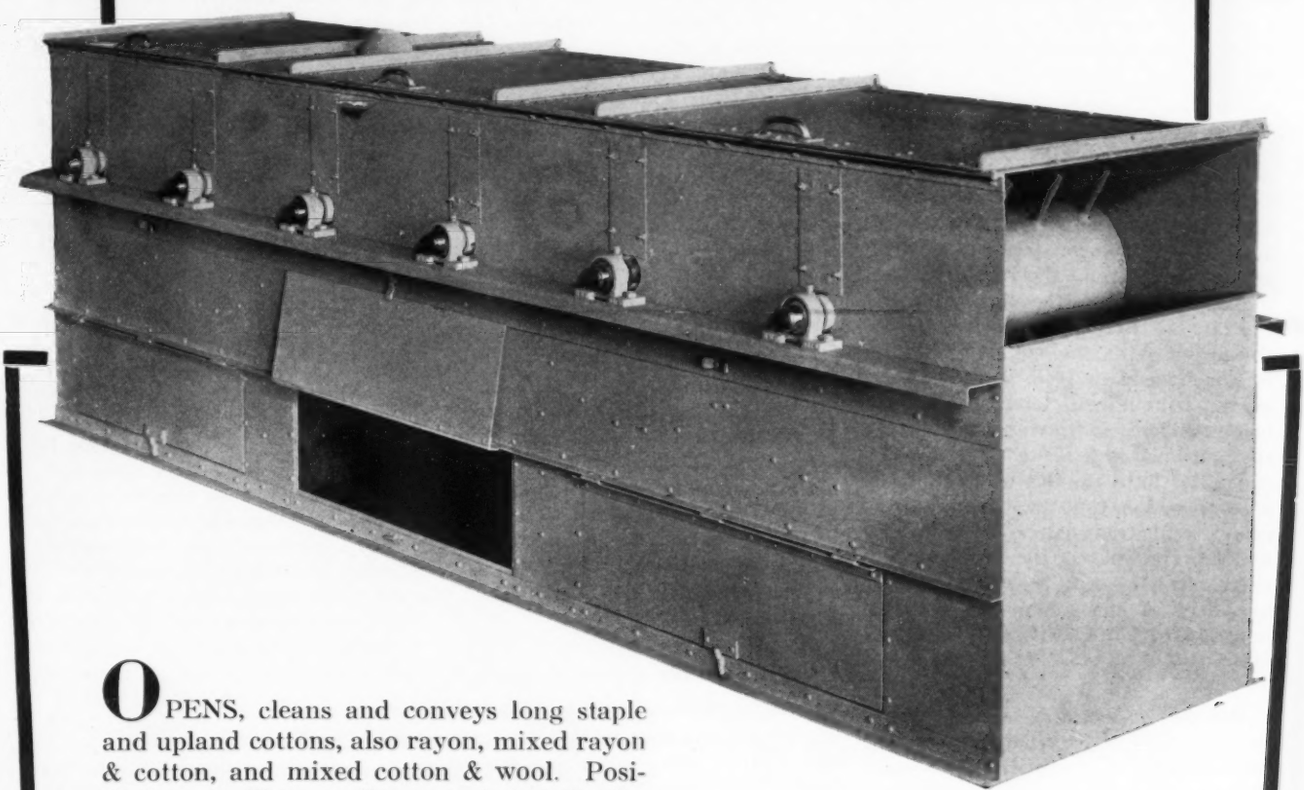
F. W. Hancock has been appointed sales manager of the Aberfoyle Manufacturing Company and has taken over the office recently resigned by Edwin L. Dale. Mr. Hancock, who is a graduate of the Philadelphia Textile School, will have as his assistant W. T. Galey, grandson of the founder of the company.

E. Prentys Word, representative for The Lunkenheimer Company in the Virginia and North Carolina territory, has changed his address from Richmond, Va., to 414 Forrest Ave., Greensboro, N. C.

The SUPERIOR CLEANER

(Patented)

FOR LONG STAPLE & UPLAND COTTON



OPENS, cleans and conveys long staple and upland cottons, also rayon, mixed rayon & cotton, and mixed cotton & wool. Positively no rolling, curling, nepping, stringing or staple breakage. Takes out motes, sand, leaf, etc., also removes metal, glass, rocks, seed and other hard materials heavier than the fibre.

You can operate this ultra-modern machine as a complete independent unit following Bale Openers and Blending Hoppers or you can use it to supplement your present Centrif-Air Cleaners, Vertical Openers, Buckley Beaters, Lattice Openers, Platt Openers, Gyrators, Downstroke Cleaners, etc.

It delivers cotton and rayon completely open, absolutely free of curl and in ideal mechanical condition for the pickers.

Our Guarantee—This machine must accomplish all we claim for it and prove entirely pleasing, or you can return it for full credit. Write today for complete data on this answer to your opening, cleaning and conveying problems.

The Centrif-Air Machine Co., *Inc.*

ENGINEERS ***(Licensees)*** **MANUFACTURERS**

ATLANTA, GEORGIA

American Viscose Corporation has announced that Edward H. Look will assume Graeme G. Whytlaw's duties in the Providence office of the company, Mr. Whytlaw going to the Marcus Hook, Pa., plant where he is in charge of sales department. Mr. Look is succeeded in the New York office by F. Douglas Cudlipp. Cyril Summer, Jr., has joined the sales force at the Providence office.

M. L. Bales has recently disposed of all his interests in the Ragan Knitting Company, Inc., of Thomasville, North Carolina. He retains his interest in the Maurice Mills Company, Inc. of Thomasville, N. C. and the Bales Hosiery Corp. of High Point, N. C., to which two companies he will devote all of his time from now on. Prior to the mentioned developments, Mr. Bales had acted as secretary, treasurer, and general manager of the Ragan Knitting Company, Inc. since the death of the late A. H. Ragan. He had been connected with the company since it was formed in 1918, serving first as superintendent, later becoming vice-president and general manager. He continued in these last-mentioned capacities until the death of Mr. Ragan, at which time he became secretary and treasurer. The Ragan Knitting Company, Inc. was originally started by J. H. Adams, then president of the Adams-Millis Corporation of High Point, North Carolina.

Moffatt Bearings Company, with headquarters in Philadelphia, Pa., has opened a new branch office and warehouse at 601 Spring St., Atlanta, Ga. The company provides engineering sales service on all types of ball and roller bearings, with facilities for furnishing all obsolete and odd types of special bearings. The Atlanta office is in charge of R. G. Talman.

United States Testing Company, Inc., Hoboken, N. J., has installed a new weather-ometer and the company can now make complete weathering and aging tests on paints, lacquers, leathers, and coated fabrics. The contraction and expansion caused by light, heat and varying degrees of moisture, along with other deterioration encountered in actual outdoor weathering are duplicated on the new equipment.

The company has recently completed installation of a new standard temperature and humidity controlled conditioning room at its southern testing house in Greensboro, N. C., the new room being insulated with vapor sealed Celotex and illuminated with new fluorescent lamps. Parks-Cramer installed air conditioning and dehumidifying equipment.

Wm. H. James & Associates have announced that their new headquarters are located at 1101-9 Hurt Building, Atlanta, Ga., This constitutes a move from one floor of this building to another.

American-Marietta Company, 43 East Ohio, St., Chicago, is the new name after the consolidation of the American Asphalt Paint Company of Chicago and its subsidiary, The Marietta Paint and Color Company, Marietta, Ohio. Grover M. Hermann, founder of American Asphalt, is president of the new concern. The company's plants are being enlarged.

F. J. Geiger has been appointed to the position of assistant manager of the electrical department of Allis-Chalmers Manufacturing Company, Milwaukee, Wis., in which capacity he will be in charge of sales and engineering at the company's Norwood, Ohio, plant. Mr. Geiger fills the position recently made vacant by the retirement of C. J. Rattermann, who had served the company for nearly 40 years.

◆

Dallis Now Commercial Agent of Commerce Bureau

Ernest E. Dallis, of Atlanta, has been appointed commercial agent of the Atlanta district office of the Bureau of Foreign and Domestic Commerce, Department of Commerce. His new duties will take him over the area covered by this office as contact man between business firms and the bureau. Mr. Dallis is well known in the textile manufacturing industry of the South, having served as public relations counsel for the Cotton Manufacturers' Association of Georgia, the Cotton Manufacturers' Association of Alabama, and other textile organizations. He has had many years experience in sales, management and promotion fields in a wide diversity of southern business.

◆

Burlington Mills Fabric Identification Program

Burlington Mills Corporation has announced plans for a fabric identification program to become effective at once on the company's rayon goods. The brand name will be "Bur-Mil". The Burlington trademark is designed in the shape of a triangle and bears the words "Bur-Mill, Quality Weave", with the familiar circles which alone have identified certain Burlington weaves for the past three or four years, incorporated as an integral part of the design. Only goods which have been finished in accord with the highest technical standards will carry the company trademark.

◆

Represents Tenney in Atlanta

Alan A. Clow now represents A. M. Tenney Associates, Inc., sales agents for Tennessee Eastman rayon, in the Georgia-Alabama territory. He has opened headquarters at 1521 Candler Bldg., Atlanta, Ga.

◆

"Scientific Price Management I"

A recent book published by The Eddy-Rucker-Nickels Company, Harvard Square at 1400 Mass. Ave., Cambridge, Mass., is "Scientific Price Management 1", written by Allen W. Rucker, president of the company. The manual treats of the first phase of price management, that phase embracing pricing moves in two types of decisions, (a) decisions involving a direct or indirect concession in price without any reduction in direct costs; (b) decisions involving increases in direct costs without any change in the regular price. It also contains the company's calculator charts—constructed for universal application in pricing problems. The book contains no theory whatever, but is a direct, concrete and practical approach to realistic management of price problems encountered in everyday business.

◆

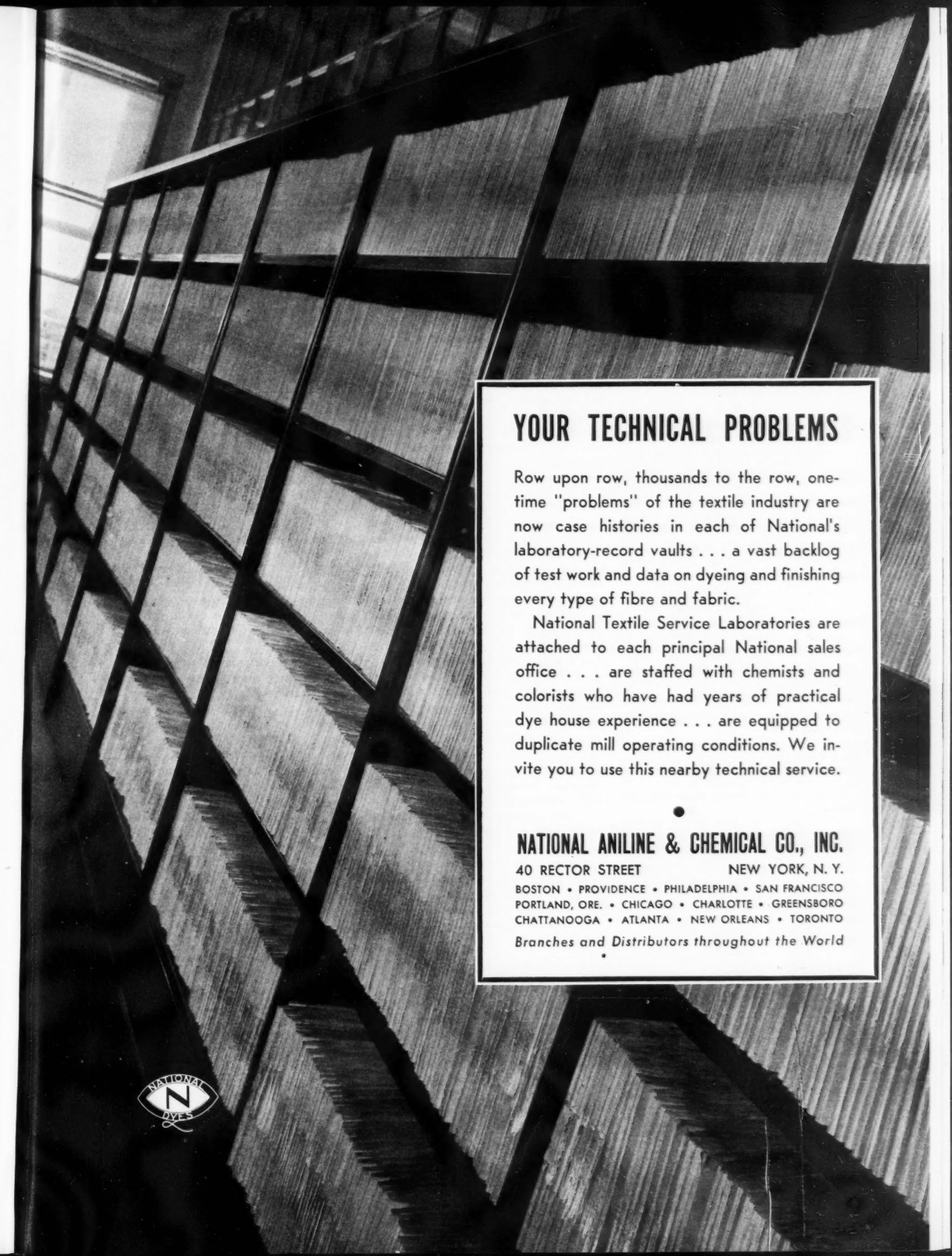
Can Your Men Run Other Jobs?

Two and three-job men are the need of industry today. By this I mean, you as a supervisor should be training men to perform *more than one job* or operation. A man who can do two or three jobs equally well gives you *flexibility* to meet *emergency demands*. Men who can do more than one job can be shifted about where the need is greatest. Don't be satisfied until every one of your men is trained to do more than one job. Then you will have a *flexible working force*, capable of meeting any situation.—"*Management Information*", *Elliott Service Co., Inc.*

◆

For Supervisors

Are you interested in athletics? If your company has any athletic team, if there is an interdepartment bowling league, basketball league, or any other form of athletic competition carried on in your organization, taking a personal interest in these athletics will furnish you many an opportunity to get to know your men better. Be a fan. Get out whenever you can to attend company athletic events. Not only will you have a good time, but the people who work for you may get a new feeling about what "a regular fellow" you are. —"*Management Information*", *Elliott Service Co., Inc.*



YOUR TECHNICAL PROBLEMS

Row upon row, thousands to the row, one-time "problems" of the textile industry are now case histories in each of National's laboratory-record vaults . . . a vast backlog of test work and data on dyeing and finishing every type of fibre and fabric.

National Textile Service Laboratories are attached to each principal National sales office . . . are staffed with chemists and colorists who have had years of practical dye house experience . . . are equipped to duplicate mill operating conditions. We invite you to use this nearby technical service.

●

NATIONAL ANILINE & CHEMICAL CO., INC.

40 RECTOR STREET NEW YORK, N. Y.

BOSTON • PROVIDENCE • PHILADELPHIA • SAN FRANCISCO
PORTLAND, ORE. • CHICAGO • CHARLOTTE • GREENSBORO
CHATTANOOGA • ATLANTA • NEW ORLEANS • TORONTO

Branches and Distributors throughout the World

•

NATIONAL N DYES

New Dyestuffs

The following new dyestuffs are made available by Phoenix Color & Chemical Company, Inc., 24 Van Houten St., Paterson, N. J.: Benzaphen Diazo Blue NAF, a direct dyeing navy which is rendered fast when diazotized and developed in the regular way with Beta Naphthol; recommended for discharge printing where a pure white is required. Benzaphen Fast Red 8BL (C. I. No. 278) has excellent light fastness and dischargeability, moderate wash fastness and leaves celanese white. Benzaphen Fast Red F (C. I. No. 419) has good light fastness and moderate wash fastness. The solubility, penetration and leveling properties are said to be excellent.

◆

Proportioning Equipment For Corrosive Fluids

Cochrane Corporation, 17th and Allegheny Ave., Philadelphia, Pa., has designed the air-actuated proportioner especially for accurately feeding sulphuric acid in conditioning boiler feed water. A contact meter in series with a cycle controller operates an air compressor inside the proportioner shell when a predetermined flow is reached. The acid is measured into the dilution tank to which dilution water is proportioned by a simple but accurate mechanism that prevents abnormal chemical concentration, either too high or too low, usually associated with batch feeding. A special feed-line fitting provides for proper introduction of diluted acid or other fluid into the main flow.

◆

Plan Your Job

The most successful supervisors are those who have learned to *run their jobs*, rather than letting *their jobs run them.*

The way to run your job is to plan your own activities carefully.

If you wait for things to "turn up," or emergencies to arise, you will undoubtedly be on the run all of the time. On the other hand, if you will sit down and work out a daily schedule that comes as close as possible to meeting your routine needs, you will find that you have much more time for the more important parts of your job.

◆

The Good Foreman

The good foreman or supervisor, as I have observed him, does four things in playing an important part of management.

First, he studies the ideas, ideals, plans, and policies of those above him, and does his best to carry them out.

Second, he studies the ideas, ideals, and wants of those below him, and does his best to satisfy them.

Third, he gains the respect and confidence of his men by being a real part of management.

Fourth, he gains the respect and confidence of management by being a real leader of his men, and a real manager of his department.—*"Management Information", Elliott Service Co., Inc.*

Other Personals and Obituary Items

(*Other personal notes appear on page* 92)

E. WALTER MAEBERT has been appointed manager of the Blue Ridge (Ga.) full-fashioned hosiery mill of the Van Raalte Company, succeeding MORRIS MAGNIER, resigned. Mr. Maebert has been with the company since 1936, having formerly been in the employ of E. Richard Meinig Company.

DONALD COMER, chairman of the board of Avondale Mills of Alabama, has been appointed by President Roosevelt to serve as Director of the Textile Foundation, filling the unexpired term of STUART W. CRAMER of Cramerton, N. C., who passed away July 2, and whose unexpired term expires June 11, 1941.

J. W. MANLEY has resigned as president of the Sayles Finishing Plants, Inc., Providence, R. I., and has been elected chairman of the board of directors. JOHN HUTTON, for many years connected with the Phillipsdale unit of the corporation has been elected a vice-president and director and will remain at Phillipsdale as head of that plant, succeeding M. MACKENZIE who resigned a few months ago. GEORGE E. SINKINSON also has been elected a vice-president and director and will remain at the company's plant in Salesville and becomes manager of that plant succeeding HAROLD P. RENO, who has resigned as vice-president and director.

ALBERT C. KNAUS, formerly with the National Spinning Company has become associated with C. S. Fowler & Co., mill agents, where he will handle spun rayon and blended fabrics.

JOHN G. CHAPMAN has resigned as general manager of Samoset Cotton Mills, Talladega, Ala. His duties have been assumed by FRANK K. PETREA, who became superintendent there last year.

ELLIOTT J. NEAL has been appointed vice-president in charge of sales in the southern territory by Aberfoyle Manufacturing Company. He will have charge of the territory served by the company's plant at Belmont, N. C., with headquarters there. The Southern division of the company will now operate as a separate unit; formerly it was under the supervision of the general offices in Philadelphia. Mr. Neal has been with Aberfoyle for a number of years, first in the Mid-West territory and more recently in the general sales office.

ALFRED R. HALLER has resigned as superintendent of the Cowan Mills, Lewiston, Me., and is now with the Warren Woolen Co., Stafford Springs, Conn.

R. C. MOYER has been made manager of the plant of The Linen Thread Co., Blue Mountain, Ala., succeeding ARTHUR E. MASSEY, resigned. L. A. ROBERTS is assistant manager, and R. N. MALLARD is superintendent.

L. N. WOOLWORTH, formerly connected with the Meridian (Miss.) Hosiery Mills, has been made superintendent of the Hattiesburg, (Miss.) Hosiery Company, succeeding H. J. STRAUSSBERGER. It is understood that Mr. Straussberger is to become associated with some concern in the East.

Obituary

JOHN S. BACHMAN, Rome, Ga., formerly manager of the Anchor Duck Mills of Rome, passed away the latter part of July in Tampa, Fla. He had retired from active business in 1927.

WILLIAM HENRY HARRINGTON, 48, eastern sales manager of New Departure, passed away July 13 following an operation. He had been associated with the company for a number of years.

ERNEST A. DEWOLF, consulting engineer for the Universal Winding Company passed away at his home in Providence, R. I., July 1 at the age of 73. He was the oldest employee of the company in point of service.

FRANK M. LYNCH, Scranton, Pa., attorney, president of several silk manufacturing companies, passed away August 11. He was president of Olyphant Silk Co., West Pittston Silk Throwing Co., and Lycoming Silk Co., besides being associated with other silk firms.

DAN H. WALLACE, of Greenville, S. C., for the past 15 years southern manager of Keever Starch Co., of Columbus, Ohio, passed away on July 28, following by only a few days his retirement from active service. He had been connected with the company for 29 years, and was 65 years of age. He is survived by MRS. WALLACE, three sons, W. H., F. M. and D. H. WALLACE, JR. and one daughter, MRS. JOHN RICHIE, III.

ABINGTON VACUUM CARD STRIPPING

The CLEAN way!

"It's the dirtiest job in the mill." Many a superintendent has said that about card stripping by brush. But some 500 mills which strip by Abington's 100% vacuum system have actually turned this "dirtiest job" into a source of advantage and profit!

Costs Less

In mills equipped with Abington Vacuum Stripping one man strips 225 cards 3 times daily, an average of 2 cards per minute. Cost of stripping is reduced about 60%. Furthermore, the cylinder is not stopped, which reduces card down time about 75%, adding 4% production on the average. Doubles useful life of cylinder and doffer fillets.

More Humane

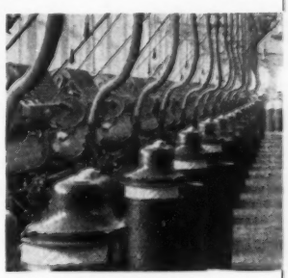
The "dirtiest job" becomes clean and safe with Abington Vacuum Stripping. No lifting of heavy brushes. No breathing clouds of brushed-up dust and fly. No exposure of operator's hands or arms to the danger of serious accidents.

Better Quality

Abington 100% Vacuum Stripping keeps card wires in better condition than is possible where a brush runs through them several times a day. Points are sharper, bends kept more accurate. Vacuum gets out ALL the dirt and short fibres, right down to the fillet. Better wires, better cleaning, better CARDING!

In some 500 Cotton Mills

Upwards of 35,000 cotton cards use Abington Vacuum Stripping, realizing definite savings on stripping cost, brushes, belts, etc.; definite production gains; definite improvements in carding quality. We make systems for both small and large card rooms. Let us send data for your requirements.



New Book tells all
REQUEST CATALOG 40

ABINGTON

ABINGTON TEXTILE MCHY. WKS. ABINGTON, MASS.
Card Strippers — Yarn Dyeing Systems — Weaver's Knotters
OFFICES AT BOSTON, MASS. • CHARLOTTE, N. C.

ARLINGTON MILLS
1865-1940
Seventy-Five Years of Service
LAWRENCE MASS.

Wool Tops Combed on Commission
BRADFORD SYSTEM FRENCH SYSTEM

Arlington combing is the basis for perfection in spinning, evenness in dyeing and the manufacture of better quality-value fabrics.

All wool combed by Arlington Mills is degreased by their famous Solvent Process. No alkali is used, harsh handling is eliminated so the natural condition of the fibers remains undisturbed. This establishes the basis for uniformity in all succeeding operations of manufacture.

Specify Tops, Arlington Combed

Use Wool Tops combed by this superior method available in sliver form or cut to specified lengths. Specify ARLINGTON COMBING when ordering from your top maker. Address combing inquiries to our Boston office.

WILLIAM WHITMAN COMPANY, INC.
Selling Agents
78 Chauncy Street, Boston, Mass.

NEW YORK: 261 Fifth Avenue
PHILADELPHIA: 1600 Arch Street
CHARLOTTE: Commercial Bank Building

New Textile Publications

The Permutit Company, 330 W. 42nd St., New York City. Bulletin No. 2357 describing a new line of trayless deaerating heaters; and No. 2341 on the company's hot process water softeners.

J. E. Rhoads & Sons, 35 N. Sixth St., Philadelphia, Pa. Folder concerning leather packings.

Republic Steel Corporation, Cleveland, Ohio. "The Welding of Republic Enduro Stainless Steel", a new 20-page booklet containing up-to-the-minute data on welding of stainless steel by various commercial methods. Also folder listing the analyses and properties of 13 of the most popular types of Enduro stainless steel.

Northern Equipment Company, Erie, Pa. Bulletin 429 describing the Copes flowmatic regulator, a simplified two-element steam-flow type.

Calco Chemical Division, American Cyanamid Company, Bound Brook, N. J. Literature featuring a red-brown sulphur dye, Calcogene Violet Brown CF.

Glyco Products Co., Inc., 148 LaFayette St., New York City. Spanish editions of "Chemicals by Glyco" and the "Glyco Cosmetic Manual".

The Manhattan Rubber Manufacturing Division of Raybestos-Manhattan, Inc., Passaic, N. J. A bulletin describing new vibration dampener bushing, a resilient mounting now being built into wheels for portable grinders.

The Farval Corporation, Cleveland, Ohio. Broadside describing Farval Dualine Jr. centralized system of lubrication.

Penn Metal Corporation of Penna., 36 Oregon Ave., Philadelphia, Pa. Pocket booklet "Steel Lockers, Cabinets, Shelving", No. 44 Series A. Gives detailed specification and prices of heavy gauge steel lockers, cabinets and shelving. Summarizes applications and points out possible savings in floor space, material handling time and tool control operations.

Cochrane Corporation, 17th and Allegheny Ave., Philadelphia, Pa. Publication 2985 descriptive of the air-actuated proportioner designed for feeding sulphuric acid in conditioning boiler feed water.

Westinghouse Electric & Manufacturing Company, East Pittsburgh, Pa. The following publications: Descriptive data 3105, a 4-page leaflet describing Type CS totally enclosed fan-cooled squirrel cage motors from one to 200 hp. Catalog section 26-325, a 4-page illustrated leaflet describing the Type WT-4 portable modern ac welder, designed for all-around general utility service and production welding. Folder A-3578 describing Type F fluorescent Mazda lamps and their application. Booklet 3650, a 24-page illustrated booklet on the complete line of Type SU speed increasers. Order all literature from Dept. 7-N-20.

Condenser Service & Engineering Company, 310 12th St., Hoboken, N. J. Lubricating oil cooler catalog No. 31.

Steel Heddle Manufacturing Company, 2100 W. Allegheny Ave., Philadelphia, Pa. "Interesting Facts on Hard Chrome Plating, Its Preparation and Finishing". It treats on the difference between hard chrome and ordinary chrome plating, etc.

Worthington Pump & Machinery Corporation, Harrison, N. J. A master manual in which power transmission through V-belts is presented in an exceptionally clear and interesting way.

Allis-Chalmers Mfg. Company, Milwaukee, Wis. Bulletin No. B-6048 on single-stage turbo-blowers for use throughout industry where large volumes of air or gas are needed at pressures from one to 6.25 pounds. Also, bulletin No. B-6051-A on the company's Texrope drive.

Johnson Bronze Company, New Castle, Pa. Three new bearing data sheets dealing with Ledaloyl, a self-lubricating bearing. Subjects of sheets are controlled lubrication, bearing loads and press fit "close-in".

The Foxboro Company, Foxboro, Mass. Folder quoting some of the demonstrated benefits of modern instrumentation.

Stephens-Adamson Mfg. Co., Aurora, Ill. Volume 186 of the "Labor Saver", a magazine illustrating various applications of materials handling equipment.

Brosites Machine Co., Inc., 30 Church St., New York City. Literature descriptive of the Webcell continuous dialyser for the recovery of soluble salts, removal of acids, separation of colloidal material from colloidal dispersions.

Henderson Foundry & Machine Works, Hampton, Ga. New catalog of repair parts for various types of existing equipment for cotton card and spinning rooms.

A smart checked Teca flannel for campus wear. This warm, crush-resistant weave from Southeastern Cottons is an Eastman design containing a high percentage of crimped acetate rayon. Courtesy, Tennessee Eastman Corp.

July Rayon Yarn Deliveries Highest for Year to Date

Shipments of rayon filament yarn during June to domestic consumers aggregated 32,700,000 pounds, the largest for any month thus far in 1940, states the *Rayon Organon*, published by the Textile Economics Bureau. These shipments were slightly larger than the 31,400,000 pounds shipped in June. The record July deliveries, the publication states, resulted in a reduction in producers' stocks of yarn from 12,800,000 pounds at the end of June to 11,400,000 at the close of July. The higher July shipments, therefore, were accomplished entirely by a reduction in producers' stocks.

Production of rayon yarn reached the record figure of 97,500,000 pounds during the quarter ended June 30th. Of this total viscose-cuprammonium production totaled 64,500,000 pounds, or 66 per cent, but of additional importance is the fact that this yarn was produced at an average denier finer than was made in the first quarter of the year. Acetate process yarn output amounted to 33,000,000 pounds, or 34 per cent of the second quarter total.

Production of rayon staple fiber in the second quarter amounted to 19,100,000 pounds, a figure slightly below the 20,500,000 pounds produced in the first quarter, but well above the 11,500,000-pound production of the second quarter of 1939. The publication states that, with future imports of foreign staple at a very low level and with the usual fall seasonal increase in staple fiber consumption directly ahead, there is a bright outlook for the domestic staple fiber industry.

Institute Book Revised

The reception accorded to the first edition of "Cotton from Raw Material to Finished Product" has prompted the Cotton-Textile Institute, Inc. to issue a second edition, revised and brought up to date and containing more swatches than its predecessor. The second edition has just been published. The book contains a veritable mine of information concerning the characteristics and qualities of cotton, its uses, cotton mills and their products, spinning and weaving of cotton, finishing of cotton fabrics and description and uses of staple cotton fabrics. It should prove valuable to all connected with the cotton industry, to store buyers and sales clerks, to teachers of home economics and to consumers who wish to know more about this product of universal use. The book sells for 75c and may be obtained from The Cotton-Textile Institute, Inc., 320 Broadway, New York City.

◆

New Approach to Labor Relations

A new approach to the problem of labor relations, designed specifically for the textile industry, is being offered to the mills by Stevens-Davis Company, 1234 West Jackson Blvd., Chicago, Ill. The program has been developed with the assistance of a number of advisors connected with the textile industry, and familiar with the needs in this field of furthering relations between management and workers. The company, established in 1904, has been prominently identified with various programs relating to industrial problems and labor relations.

◆

Claude Iler Southern Manager for Keever

Claude B. Iler, Greenville, S. C., has been made southern manager for Keever Starch Company, of Columbus, Ohio. He was appointed upon the retirement from active service of the late Dan H. Wallace, who passed away only a few days following his retirement. J. C. Attaway, Greenville, S. C.; F. M. Wallace, Homewood, Birmingham, Ala.; and Luke J. Castile, Charlotte, N. C., continue as the company's sales representatives under direction of Mr. Iler.

◆

Patents Granted

According to Paul B. Eaton, patent attorney, Charlotte, N. C., W. A. Kennedy of Charlotte has been awarded a patent on a pick counter which removes all friction between the driving shaft and the worms which drive the counter shafts. Also, Lyman Hamrick of Gaffney, S. C., was granted a patent on a cloth marking machine for making patterns on cloth to be used in tufted bedspreads, etc.

You Can Benefit by Our

SEVENTY-FIVE YEARS *of Yarn Dyeing Service*

Among the first to use each new dyestuff and dyeing method, Globe has held fast to older methods, too, that are fundamentally right or that cannot be replaced with others of equal or greater merit.

Globe is, therefore, equipped to give you whatever type of yarn dyeing is best for your product.

Modern machine and fine hand skein dyeing, package dyeing on tubes and warp dyeing are equally understood and provided for in the extensive Globe Dye Works plant at Frankford. Dyers of cotton, rayon, spun rayon, nylon, linen, ramie and other yarns.

Globe service is prompt, efficient and dependable.

YOU CAN Globe DYE WORKS CO. **RELY ON**

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FRANKFORD, PHILADELPHIA, PA.

Dyed Yarns and Commission Dyeing

CUMOL TINTS

A FUGITIVE IDENTIFICATION FOR CUT STAPLE AND BLENDS

Here's an important step forward in identification tints. Cumol Tint is an oil soluble dye. Because it eliminates the use of water, Cumol Tint prevents rusting of pickers and cards . . . dries immediately, saving time. Cumol Tint is recommended for identifying spun rayons, cottons, acetates. Cumol Tint was developed by the United States Testing Company, Inc. and is available nowhere else. Sold in 5 gallon cans and 50 gallon drums.

A FUGITIVE TINT SOLUBLE IN OIL

✦

TINTS AVAILABLE IN THE FOLLOWING COLORS:
Red Blue Yellow Green
Grass Green Purple Orange Brown

UNITED STATES TESTING COMPANY, INC.

ESTABLISHED 1880

HOBOKEN, NEW JERSEY

NEW YORK PHILADELPHIA GREENSBORO WOONSOCKET CHICAGO

PERSONAL NOTES
About Men You Know

ROBERT R. WEST, who resigned last spring as president and treasurer of the Riverside & Dan River Cotton Mills, Danville, Va., will, on September 15, become director of the new Bureau of Industrial Research at the University of Virginia, Charlottesville, Va. The establishment of this bureau was made possible by a grant of $48,800 from the General Education Board to the University over a four-year period. A survey of the predominant industries of Virginia will be made by Mr. West, following which the University hopes to offer advice to Virginia communities in the way of establishment of industries that will utilize their surplus natural resources and their surplus labor.

ARTHUR E. MASSEY, who recently resigned as manager of The Linen Thread Company, Blue Mountain, Ala., has accepted a position in charge of Exposition Cotton Mills, Plant No. 2, at LaFayette, Ga., which is being re-opened.

ROBERT NEWELL, formerly associated with the Queen City Cotton Company, Burlington, Vt., has accepted the position of superintendent of weaving at the Ashland Corporation, Jewett City, Conn.

D. K. WOODARD, for many years connected with Barnes Textile Associates, Inc., consulting engineers to the textile industry, and more recently associated with the Riverside & Dan River Cotton Mills, Danville, Va., has again joined the Barnes organization, making his headquarters in the Johnston Building, Charlotte, N. C.

W. T. CROWDER, formerly overseer of spinning at the Chadwick-Hoskins Co., Mill No. 3, Charlotte, N. C., has been made overseer of spinning at the Martinsville (Va.) Cotton Mills, a plant that is also associated with the Gossett chain.

O. B. BISHOP, formerly overseer of weaving at the Inman (S. C.) Mills has become overseer of weaving at the Gayle plant of Springs Cotton Mills, Chester, S. C., succeeding J. H. BURGESS, who is overseer of weaving at the Marion (N. C.) Manufacturing Company.

W. C. BOWDEN, formerly night superintendent of the Brazos Valley Cotton Mills, West, Tex., has been appointed superintendent of the Waco (Tex.) Twine Mills.

DONALD MCMAHON has been appointed superintendent at the Peerless Woolen Mills, Rossville, Ga.

W. E. WILLIAMS has become assistant superintendent of the Bevelle Plant of Avondale Mills of Alabama, Alexander City, Ala.

W. H. SPENCER, JR., who has been overseer of weaving at Whitney, (S. C.) Manufacturing Company, has accepted a similar position with the Spartan Mills, Spartanburg, S. C.

ROBERT H. HOPE recently resigned as superintendent of the Erlanger Cotton Mills Company and Nokomis Cotton Mills, Lexington, N. C., to accept a position as assistant superintendent of the Mayfair Mills, Spartanburg, S. C., and is succeeded at Lexington by C. J. MEAGHER.

MORTIMER L. TAYLOR resigned as manager of the spun rayon department of Cone Export & Commission Company and is now in charge of a similar department with Irving Schwartz Company.

DAN R. JOHNSON has been made superintendent of the cotton mill at the state penintentiary, Nashville, Tenn., succeeding S. L. CARTER.

C. W. BENDIGO, who has been superintendent of the High Point (N. C.) Weaving Company, has resigned and is now superintendent of throwing and preparation at the Judson Mills, Greenville, S. C.

W. REED GODFREY, for several years an erector with Abbott Machine Company and Barber-Colman Company, has become associated with the Hamrick Mills, Gaffney, S. C., as secondhand in spinning.

A. L. MORROW has succeeded CLAUDE F. PIPES as superintendent of the Houston Textile Company, Houston, Tex.

(Additional personals and obituary items on page 88)

Waiting Room Stuff

By Our Telephone Operator

Last month we observed: Hugh Black, Greenville bachelor, trying out a new car with a good looker close beside him; Hugh said there were two things throbbing, one was the gear shift. . . . Spot "Scotchman" Bailey, of Greenville, betting a filling station man fifty cents he couldn't find the nickel tied in the handkerchief, and losing. Ever try dropping the pigeon, Spot?

•

Understand Luther Knowles, Clinton Starch Company's go-getter, recently took some of his friends to Iowa in a private plane, where they enjoyed a cruise on a private boat and were entertained at a private club? What about the private stock, Luther?

•

If you know anything about building construction or maintenance, and are between 25 and 35, and ain't going to get drafted, there is a top-flight paint line you might connect with for Georgia, Alabama and Tennessee.

•

Is it true that Hext Perry and Earl Davis can sit in their office in the Woodside Building at Greenville and read a salesman's mail in the north side rooms of a certain hotel? (For a real Chamber of Commerce reception, with the accent on the Commerce, you should call on these boys. They buy for about a couple of hundred mills.)

•

Wonder how you go about getting those French post-cards now?

•

Get Edwin Howard to tell you how many picks per minute his heart was making the time that cyclone lifted his car out of the road with him in it.

•

John D. Spencer, Barber-Colman's genial ambassador at Greenville, could easily pass for a physician.

•

If you own a boat, Commodore "Sandy" Cooley would like to hear from you. He might let you bring it up the Catawba River.

W. S. "Andy" Anderson, Charlotte, wants to know what it is a certain mill man has got that he ain't got.

•

Who was that up-to-the-minute salesman who used to have a dictating machine in his car on which he made reports to his house, and why doesn't he have one now?

•

Did you know that George Snow has a gold mine in Georgia? Well, almost.

•

It's about time John Turner was showing up around the Mecklenburg.

•

Jack Roy, Greenville, is another New Englander who is now selling a lot of card grinding equipment in the South and has learned to eat grits.

•

Now that a certain court trial is over at Charlotte, a lot of salesmen have gone back to work.

•

What tender passion caused Murray Keeler to request a permit to carry a passenger in his new plane?

•

Johnny O'Neill, Dary's Atlanta representative, recently moved into a new home—in order to have room to keep his horse.

•

It's Grandpa Bill Randolph now, since the arrival of Glenn Fisher, Jr., in Columbus.

•

Why doesn't Pat Land have to go over to Huntsville on big "deals" as frequently as he once did?

•

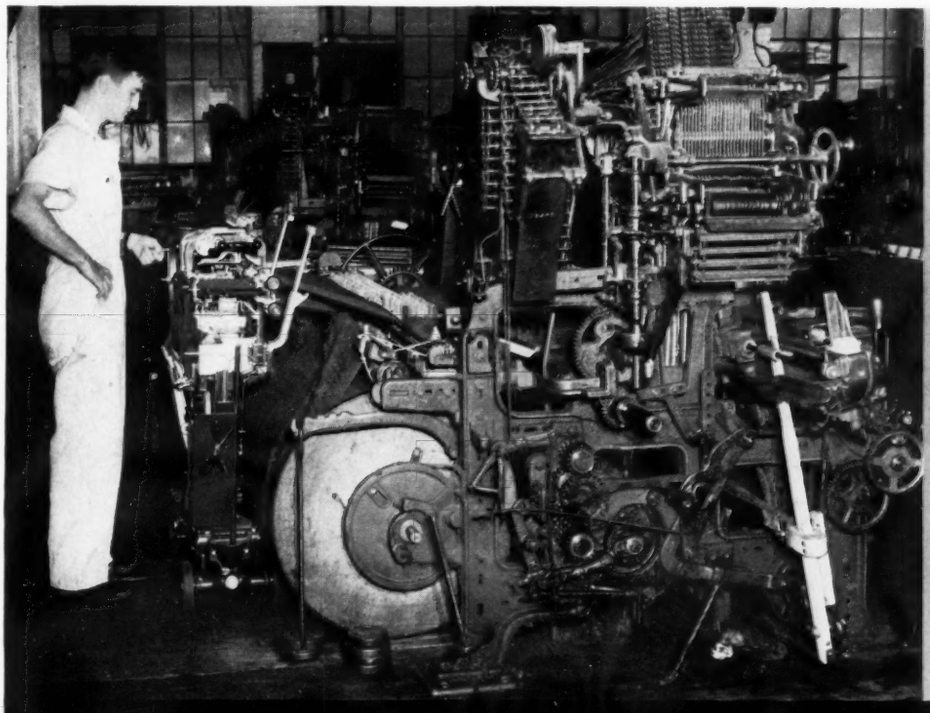
Why doesn't George Murphy wear those South American shoes that George, Jr., sent him from Buenos Aires, when he's out calling on the mills?

•

Frank North's famous trailer has been somewhat neglected ever since he became known as Commodore of Jackson Lake near Atlanta.

•

Ask Jim White, of Atlanta, to tell you about his philosophical interview with a prominent Ph. D. that lasted into the late hours down at Sea Island last summer. . . . .



BARBER-COLMAN

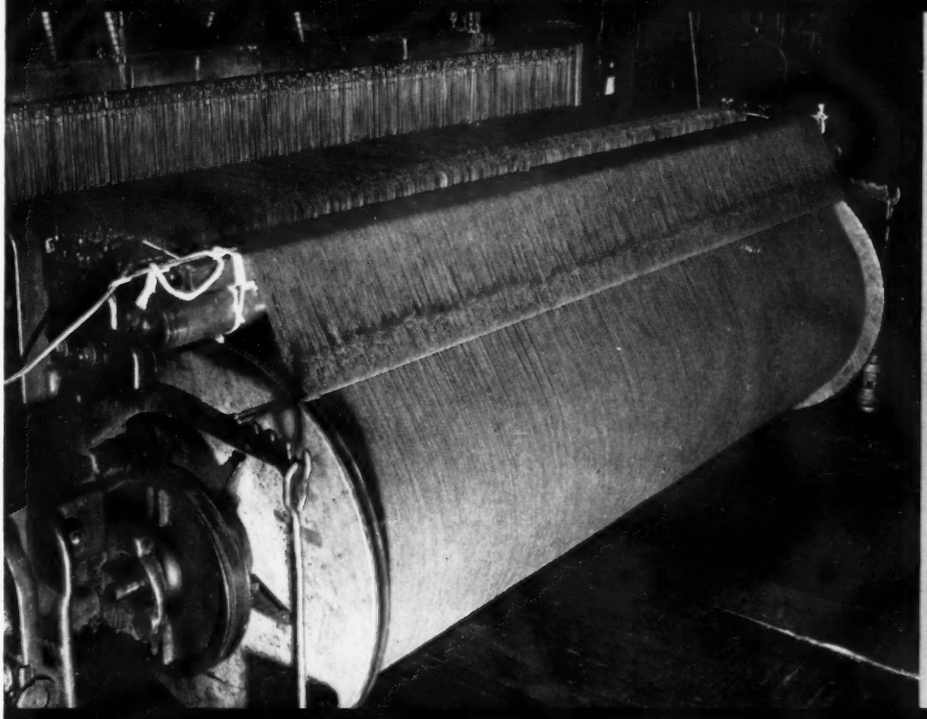
Portable

WARP TYING MACHINE

MODEL "LS"

TYING-IN WOOLEN WARPS... AT THE LOOM!

LOW COST WARP REPLENISHMENT - HIGHEST QUALITY RESULTS



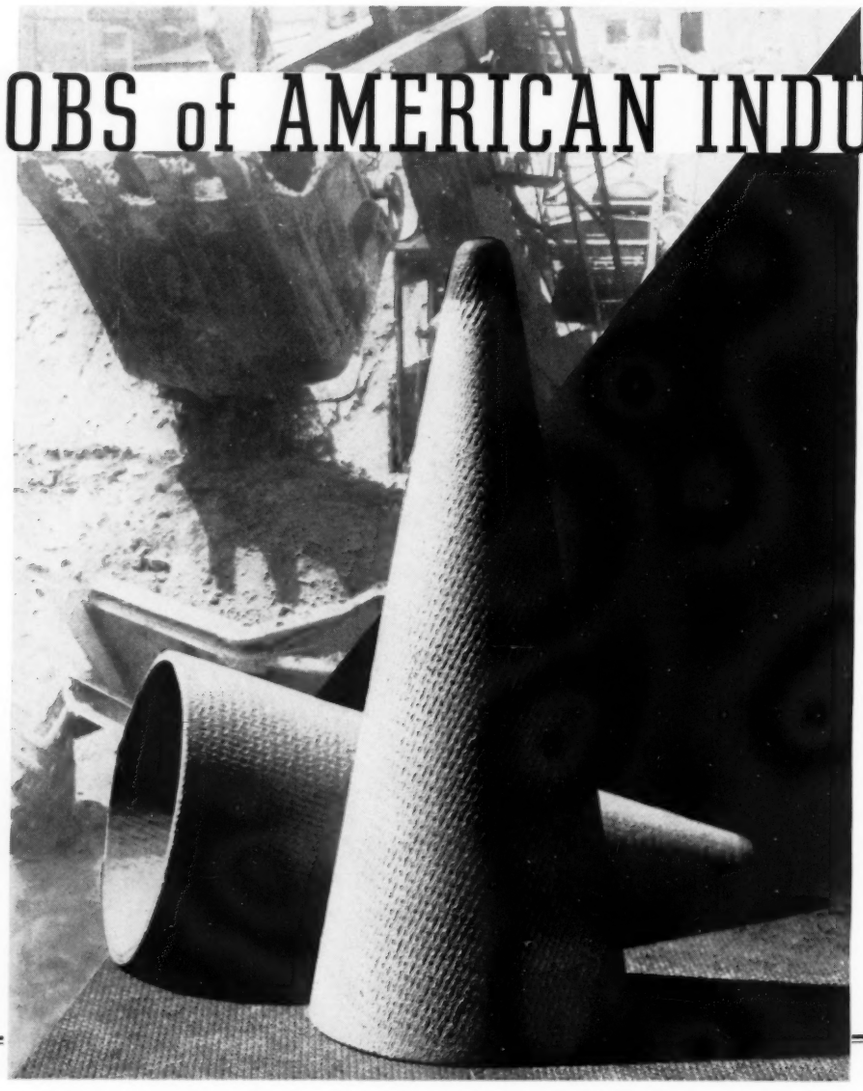
Above, operator using Model "LS" machine equipped with new tying mechanism for woolen yarns. Left, woolen warp completely tied-in at the loom. These pictures were made in a prominent mill which manufactures automobile upholstery fabrics and blankets.

BARBER-COLMAN COMPANY

ROCKFORD, ILLINOIS, U. S. A.

FRAMINGHAM, MASS., U. S. A. • GREENVILLE, S. C., U. S. A. • MANCHESTER, ENGLAND • MUNICH, GERMANY

BIG JOBS of AMERICAN INDUSTRY



depend on many little jobs well done ~

The steam shovel does a spectacular big job. It attracts many "watchers," few of whom realize that big jobs are accomplished only through the coordination of many essential little jobs.

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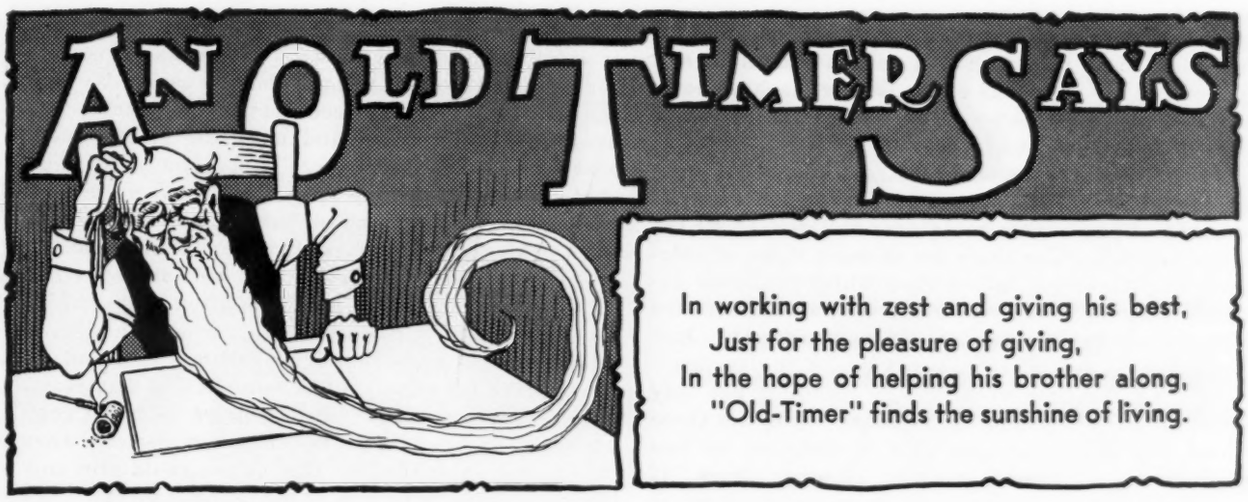
AN OLD TIMER SAYS
In working with zest and giving his best,
Just for the pleasure of giving,
In the hope of helping his brother along,
"Old-Timer" finds the sunshine of living.

SYSTEM (*Continued—Part 2*)

IN THE August issue, page 97, OLD-TIMER began discussing with his friend, JIM, the necessity for some sort of system in the purchasing and use of mill supplies and equipment, and accurate records of their life.

In the second installment of the discussion below, OLD-TIMER describes in detail the system he developed for the purchasing of lubricating materials, and how his experience with this naturally carried the application of the plan to check straps for looms. It is suggested that the reader go back and review the August article before reading this one.

Next month, OLD-TIMER will continue a discussion of the use of this kind of system in the purchasing of pickers and other equipment.

(Since this article is written in conversational style, it should be borne in mind that those paragraphs in regular type represent OLD-TIMER's part in the conversation, while those in *italics* represent JIM's part.)

The first problem I ran into, JIM, when taking charge of three mills with a total of over 200,000 spindles was the lubricants we were buying. We were buying from three large oil firms with the result that three salesmen were calling on us regularly, with an extra call now and then by the sales manager or some other official of the firm. The number of spindles we had of course made the account attractive to each of the oil companies, and they kept the trail hot for fear one of them would lose out or not get his share of the business.

We also were confronted with the fact that one superintendent would claim that he could get the best results only from a certain spindle oil which one oil firm sold us while another superintendent was just as firm in his belief that he could get the best results only from a spindle oil being furnished by one of the other firms. This difference of opinion was prevalent throughout the plants as to other oils, greases, etc.

To express it mildly, the situation was somewhat of a mess; therefore, after mature thought and much argument and discussion we finally called the representatives of the three oil companies in for a general confab at one of our overseers' meetings where we rather arbitrarily took the following position: All overseers and superintendents agreed that the three oil firms were reputable firms, supplying lubricants to many mills such as ours; therefore, each of these oil firms was in position to furnish lubricants for all the types of machinery we had because they all were already doing so to many mills.

My proposition to the three firms then, was briefly this: We would give one of the oil companies all the business for six months, then give each of the other two firms all of the business for six months. My instructions to them were that the volume of business was large enough to justify them in sending their lubricating engineer or expert to the mill to see what lubricants we were using, the price we had been paying and the quantities we had been using; that is, not so much the gallons of oil we had been using but the frequency of application to the machines such as at what intervals we oiled pick cams on looms, top rolls on spinning, comb boxes on cards, beater boxes on pickers, etc., etc. Then it would be up to them to furnish the lubricant they recommended for the different machines and instruct our overseers how often the applications should be made.

We explained that we would not even ask the price of any item they shipped us, nor have anything to say about the quantity—the salesman need not come to the office except to say Howdy! if he cared to. He could go direct to the receiving clerk where we kept a perpetual inventory and make out his own order; in other words, he could ship us the quantity his judgment dictated; he could charge us 25 cents per gallon for a machine oil to use on machines we had been using a 17 cent oil on if his lubricating engineer advised it. At the end of the six-months period he would be required to take up all unbroken packages of his oils or greases we had on hand so the other firm would get a fair start on their six-months period.

At the end of six months we would furnish all three firms a report of gallons of oil and pounds of

greases used, with prices of each and a report of machine hours run, with cost per machine hour and gallons of oil or pounds of grease per machine hour. After our six-months period for each firm the period would be extended to 12 months.

It is of course apparent to the reader what some of the advantages of this arrangement were, but no amount of explaining could ever tell you of *all* the advantages, because there are so many items of valuable manufacturing information which you, your superintendents, your overseers and your section men will learn, that you will really be surprised. Just to mention a few of the advantages of the system:

1. All the time we had been spending, not only with the salesmen and sales managers of the three firms was saved but also most of the time we had been giving all the oil salesmen of other firms. If a mill is paying its manager or superintendent or buyer, or whoever purchases supplies, $500 per month or $1500 per month a simple calculation will show you what such a time-saving system will do.

2. The oil company saved money because its salesman no longer had to keep the "trail hot" for fear of losing his share of the business. They made a big saving in transportation by being able to ship in large quantities, and they saved in many other ways too numerous or unnecessary to mention. But, don't forget, most of these savings were passed on to our mills because the oil companies, like all other firms selling to textile plants, arrive at the cost of their product by including the cost of selling, which includes the salesman's salary plus his expenses, the sales manager and other officials who are responsible for sales, and as you know oftentimes the total cost of selling a product amounts to more than the raw product. For example, how much does your coal cost at the mine; then how much does it cost at your boiler room, which includes unloading and waste, and don't forget the cost of selling is still in the price you pay for coal at the mine. As previously stated, most of these savings were passed along to us in a reduction of price, because we were the only firm enabling the oil companies to show these savings in the cost of selling their product. They naturally had to continue charging other plants the same as they had been charging them, because there was no reduction in the cost of selling to those mills.

3. Charts showing all parts of machines to be oiled and the number of hours between oilings were worked out by the lubricating engineers in co-operation with our overseers and section men, resulting in saving considerable labor and lubricants as we soon found that many bearings were wasting oil on account of being filled to overflowing and being oiled too often.

In several instances the type of oil was changed for a particular machine or bearing as a result of the records kept, and in two instances a higher priced oil was found to more than save the additional price in labor and practically cut out a rather bad condition of worn bearings which had resulted from speeding the machines up without changing the lubrication of those machines. Yes, that sounds like poor management on our part to have such a mistake as that to happen, and it *is* poor management, so we suppose the only answer is that none of us is infallible. The oil used in this instance cost 51 per cent more than the oil formerly used. We also changed to a higher priced machine oil, which was used on line shafting, and a higher priced motor bearing oil (these were large motors, 50 to 200 h.p.)

4. As stated, the reports we made out at the end of each period, at first periods of six months and later twelve months, were given to all three of the oil companies. We had nothing to hide and of course each company entered into competition to see which could lubricate a machine-hour for less, and each representative knew that if he fell much behind his competitors he was likely to lose out. It was really a pleasure to see how the engineers of those companies co-operated after the first few periods when thep waked up to the fact that no one could gtin anything by trying to cut the other fellow's throat.

The sales managers told us they learned more about the lubrication of mill machinery by this experience than they had ever known before. You see, this was actual, honest-to-goodness information that no one had ever been able to produce before, and they not only valued it very highly, but our lubricating bill showed such a saving per year that it would not sound reasonable to you if we could give you the exact figures. Besides, you can imagine what a relief and what a satisfaction it was to me to be entirely relieved of the whole lubricating problem. The oil firms looked after every detail and did it so well that every man we had was as pleased as I was. The superintendents, the overseers and the oilers were all pleased. The overseers were practically relieved of responsibility of not only the lubrication of all machines, motor bearings, shafting bearings, etc., but also such items as oil on the floors, oil on goods in process, etc., etc. The oilers were pleased, not only because their work was all charted and they knew exactly when each machine and bearing should be oiled, but their actual working time was reduced, even after we cut out some of the oilers and gave the remaining oilers more machines.

Without going further into detail on this lubricating system, we will pass on to what we consider an even more important discovery—yes, you guessed it, I am sure. With such a valuable and pleasing experience as the solution of the lubricating problem turned out to be, most any alert mill man would naturally see the advantage in applying the system to the purchase of other supplies such as shuttles, pickers, leather belting, loom strapping, bolts, especially loom bolts, loom harnesses, loom lug straps, etc., etc., etc. (*To be continued.*)

Positive or Negative Supervision

Is your supervision positive or negative? Which is your way of handling people? Harshly criticizing a man for his faults is a negative way of supervision. Praising a man for his good points is a positive method.

Penalizing a man is negative. Rewarding him is positive.

Generally speaking a supervisor who uses the positive approach builds a work force that is more cooperative and has better morale. Granted. there are spots when some of the negative approach may be effective, but the worst mistake a supervisor can make is to use only the negative and forget the positive.—*"Management Information", Elliott Service Co., Inc.*

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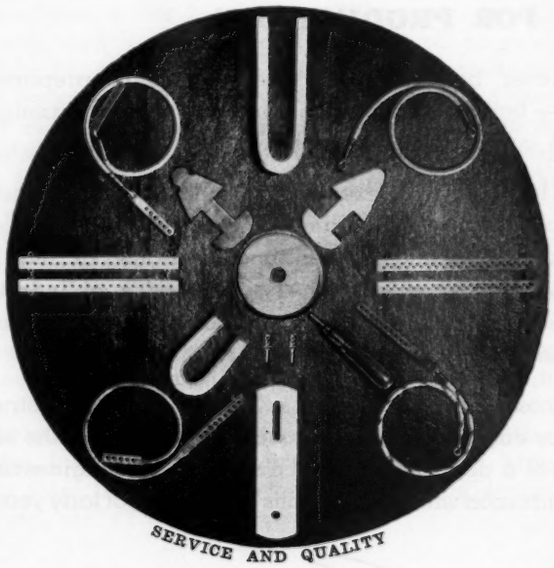

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HOW OTHER MEN MANAGE

How to Make Neps on a Card

The above heading may seem a bit strange, because many carders have no difficulty in getting neps to appear in the sliver, but in this case a man wanted to make them purposely, and "Contributor No. 7102" tells him how.

A MILL MAN recently submitted a sample of roving to COTTON, *asking how neps in the roving might be made inasmuch as he wished to process yarn containing them. When the sample and question were sent to another mill man, he made the following comment:*

In answer to the question of how to manufacture the neps, I believe that any carder will agree with me when I say that if you neglect your stripping on cards for a short time you will have more neps than you could ask for. And if you allow the clothing on a card to become dull, then the work from that card quickly becomes cloudy with neps or small bunches of fibers.

The sample submitted appears to be something similar to some nubs that I saw being made some time ago, and here is how I would go about making them, observing first that the samples show themselves to be small bunches of rolled up fibers:

As the card is the only machine that I know of that will make these neps, I would first back off or open wider all the settings on the card as far as possible, especially between the flats and the cylinder. A thin sheet of metal should be placed over or under the licker-in screen to prevent loss of neps through the screen. Then the flats should be allowed to remain stationary, since no carding motion would be desired.

If I wanted to use these neps by measuring a percentage in another process, I would back off on the setting between the doffer and the cylinder to prevent the doffer picking them up, and allow the neps to fall out through the open door at the front of the cylinder on top of the doffer. They could then be gathered by hand.

The purpose in backing off on the setting between the flats and cylinder and allowing the flats to remain stationary is, of course, to allow the cylinder clothing to load up or fill up. When the space between the flats and cylinder becomes full, you obtain the rolling motion that makes the neps.

These neps can then be distributed according to percentage desired over a given area on the feed apron of a finisher picker, to be placed in the lap. Then, of course, succeeding processes of carding must be of necessity very light or all the neps will be removed from the stock.

If there are other ways to make these things other than on the card, I would like to know about it. But right now I am doing all I can to get away from them.

CONTRIBUTOR No. 7102

WE invite our readers to make use of this department for the discussion of any and all problems arising in the mill or finishing plant. Questions, answers or letters need not conform to any particular style and will be properly edited before publishing. The editors do not hold themselves responsible for any statement of opinion or fact which may appear in this department unless so endorsed. This department is open to all.

Hard Ends on Dyed Stock

EDITOR COTTON:

"CONTRIBUTOR No. 6933", in his question on page 158 of the October 1939 issue of COTTON, has asked for settings for roving frames when running raw stock dyed cotton. He is particularly troubled with hard ends. This man is running 15/16-inch Strict Middling cotton and his set-up is as follows: Slubber front roll 240 r.p.m.; 64 grain drawing sliver, making .56 hank roving. Intermediate front roll 190 r.p.m. making 1.40 hank roving with double creel of .56 hank roving. Speeder front roll 105 r.p.m. making 4.60 hank roving from double creel of 1.40 hank roving.

The following remarks are the opinion of one man, but they are given with the hope that they may be of some help to this contributor.

	Hank	Front Roll Speeds	Figured Drafts	Average Standard Drafts	Average Standard Speeds	Size Bobbin
Slubber	.56	240	4.31	4	200	12x6
Intermediate	1.40	190	5.00	5	180	10x5
Speeder	4.60	105	6.57	6	135	8x4

The above shows that drafts are not too short for stock being run on regular draft machines. Slubber and intermediate front roll speeds are high.

There are several causes for hard ends. I agree with other contributors that there are no set rules in regards to setting drafting rolls.

There are four major causes to check for conditions causing hard ends: roll settings, twist in roving for stock used, poor piecings being made at previous

processes and too short a draft on machines.

Roll setting is important and there is no standard way of setting rolls. It is generally suggested that you should set a sixteenth to an eighth inch over the staple. It must be considered that the amount of draft, twist, bulk of product and type of cotton are factors in standards adopted for setting drawing rolls. The longer the draft, lower amount of twist and finer the product with the same staple of cotton used, the rolls can be set to a closer setting.

Setting to Staple

The following indications show the operating executive whether he is setting too far over staple or too close to the staple. If set too open the roving doesn't appear as smooth when leaving the front roll as when it is set closer. If the setting is too close hard ends will result.

Each process must be checked to find out if preceding operatives are making bad piecings by wetting their fingers or putting too much twist in strand when piecing. This can be traced by roving hands chalk mark.

If the condition is general throughout the roving frames, check up the slubber roving and find out whether you are putting in too much twist. If the twist is right at the slubbers you should then check your intermediates.

"CONTRIBUTOR NO. 6933" did not include in his information given the amount of twist he was putting in the rovings. For his staple 15/16-inch it is suggested he try the following twist multipliers:

Slubbers	1.20 and 1.25
Intermediates	1.30 and 1.35
Speeders	1.35 and 1.40

The foregoing suggestion is recommended providing his twist multipliers are higher than these given and he is not experiencing roving breaking back in creels.

It must be noticed that if he is mixing or has changed from a soft to a hard bodied cotton with plenty of character he will have to open his drawing rolls. A hard bodied cotton with good character, will be hard to draft and takes twist differently from soft cotton.

The roll setting must be set in relation to the speed of rolls. It must be considered that the drafting operation is one process which cannot be done too quickly at the same time efficiently. The speed relation of each line of rolls must be so that the drafting action can be accomplished as perfectly as possible under the existing conditions, and to enable an even yarn to be produced.

Rolls revolving rapidly must have wider setting to enable the front rolls to draw the front ends of fibers from the mass of cotton which are held by the next pair of rolls nearer the back of frames.

Various dyed roving or colors have a tendency to vary in the amount of moisture absorbed and, for example, if two or three different colored rovings are run on the same frame they will vary in weight and draft differently.

CONTRIBUTOR NO. 7025

Efficiency from Drum Rolls and Burnishers

EDITOR COTTON:

As ordinarily driven by rope bands the full efficiency of either the drum rolls or burnishers is not obtained. We have worked out a system which has given good results and has enabled us to get much better work out of these very important parts of the maintenance of the cards. To get good grinding of the top flats the drum roll must turn at a fairly constant speed; that is, it must not slow up due to the slackening of the band when the flat comes in contact with the roll. This is the only time that the roll is working and if it slows up at this time we are not getting the work from it as we should. At the very best the flat gets little grinding in the course of a year and therefore what it does get should be of the best. It is not much trouble to figure out just how long a flat grinds in one year; try it some time and you are in for a surprise if you have not already devoted some thought to this.

The first part of our system is the use of round leather bands instead of rope. We have found it is satisfactory to make our own bands at the mill. They are made out of new double belting. We find that it is false economy to try to use old belting for this purpose. The belt is first cut to the length of the bands that we wish to make and then ripped up into square strips with a leather knife. These square strips are rounded with the tool shown in Fig. 1. This tool is very little trouble to make and will give excellent results. The cutting tool *A*, is a piece of pipe of suitable size, usually about ⅜-inch. One end is ground to a cutting edge as shown. This edge can be kept sharp with a small slip rock or emery cloth. The guide *B* is a larger piece of pipe that will just slip over the cutter. This should be notched so that the cutting edge can throw off the strips cut from the corners of the belt. The slots shown are important as they let

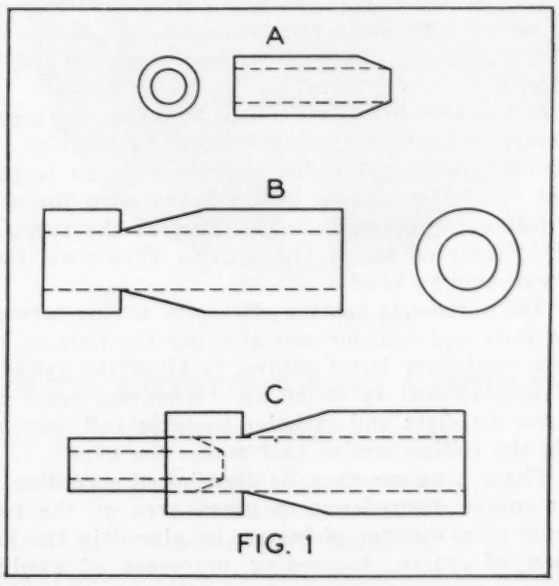


FIG. 1

the guide clamp the cutter firmly when they are placed in a vise. To use the cutter place the two pieces together as in *C* and clamp in a vise. Trim a short length of the belt (two or three inches) with a knife and insert in the guide end of the cutter. Push on this end until the belt emerges from the other end of the tool, then grasp it with a pair of pliers and pull. It will not be necessary to use the pliers after sufficient belt has passed through the tool to afford a hand hold.

After rounding the belts they are spliced and glued making them endless. This is a little more trouble at the start but will save much time in the long run. We have never found a fastener that will work satisfactorily on round belts, and by making them endless at the start we have done away with the constant fixing of them.

The second part of our system is the use of idler pulleys on all drum roll and burnisher drives. These idlers are shown in Fig. 2. *A* shows the construction of the stud and pulley. This style is for use on the makes of cards that have a flange on the side of the arch. The slot in the stud fits over this flange and is held in place by the set screw. *B* shows this set-up on the card. The position of the idler can be varied to suit the length of the band and as the band stretches the necessity of taking up is eliminated. Care should be taken not to get the bands too tight, just tight enough to prevent slippage. By watching and listening to the roll one can easily see or hear any slowing up of the roll and adjust the band accordingly.

Some makes of cards do not have this flange on the arch. On these cards the idler is attached by means of the bracket *C*. This is merely a length of flat iron, twisted in a half turn at one end. This short end has a hole in it so that it can be fastened under a bolt on the card. Any bolt that is close to the place where the idler will work will do. The bracket can be made of suitable length and shape to work the idler in the right place. On most cards one of the bolts that holds grinding stand to the frame will be found just right to hold this bracket.

There is one other method of holding the idlers to the bands, shown in *D* and *E*. This method instead of holding the idler firmly in one place puts the idler on a pivoted arm and lets the weight of the idler and arm fall against the band. There are advantages and disadvantages to this method. When the band starts to slip the pulling side tightens and the other side slackens, this makes the idler fall and it immediately takes up the slack, also by causing the band to come in contact with more of the pulley it prevents any further slippage. This type is more trouble to make and more trouble to keep in good working order. They are also more trouble to move from card to card. However they may be the best type in the long run for cards that have the drum rollers on the back part of the top. They cannot be used on cards that have the drums directly over the driving pulleys. The studs for these idlers are the same as the others with one difference, they have a hole instead of a slot in them as shown at *D*, Fig. 2; this hole is for the end of the rod to fit in. The other end of the rod has a ring or collar on it. This end of the rod is fastened to another stud made as shown at *A* and works freely on it. The collar on the rod must be of sufficient width to prevent the idler from twisting and must work freely or there will be no benefit by using it.

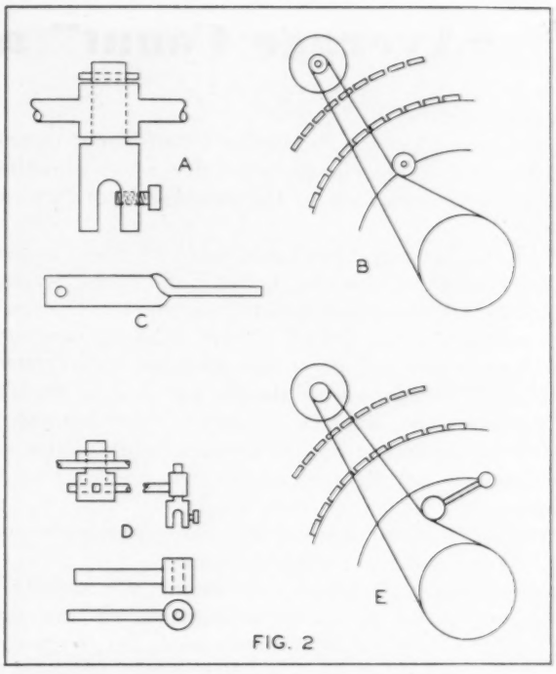


FIG. 2

The use of either of the idlers, together with a high speed on the drum rolls and light grinding, will soon make a difference in the appearance of the tops in most any card room. We find that they are easier to keep sharp, and that our trouble with high flats has disappeared. The best time to grind a top is just before it needs it and then, *grind lightly*. Heavy grinding is the cause of many evils on the tops; don't be guilty of it. Few people will deliberately grind a top heavily, but often, due to the slipping of the bands and the consequent slowing of the drum, they are grinding heavier than they think and causing troubles that they are trying to correct. Make this little experiment and note carefully the results: Put the drum roll to grinding on a top with the ordinary band and set it in the usual way; then remove the old band, put on a leather band *with an idler* and start it up. Nine times out of ten you will have to lighten up on the drum for you will find that you are grinding too heavy.

The same difference will be noted in the action of the burnishers, let a burnisher run on a top in the ordinary method for a round or two, then change the bands and put on the idler. Watch how much better the top is cleaned after the change in the drive.

CONTRIBUTOR NO. 6745

As I See It

I know of no better training for higher executive positions than the experience of foremanship.

It trains a man in solving problems of labor relations, costs, getting out the work, economy, equipment, and supervision—the very same problems that the higher executive meets on a larger scale.

Start thinking of your job as a managerial job, and handle it like a real manager.

Some day, if you qualify, your opportunity will come.—*Glenn Gardiner in "Management Information".*

"Average Count" and "Resultant Count"

EDITOR COTTON:

On page 94 of the September 1938 issue of COTTON, I attempted to clear up the confusion which sometimes occurs with reference to the calculation of "average counts".

In the January 1940 issue, page 89, there appears a new confusion, this time between the terms "average counts" and "resultant counts" in the contribution of "CONTRIBUTOR No. 6972". There exists a very clear distinction between the two terms, as "CONTRIBUTOR No. 4022" recognizes in stating his case in the January 1938 issue, since he writes: ". . . we are not figuring resultant counts of the yarn after plying several threads of different counts, but are figuring the average of the yarns that go up to make the ply yarns." Thus the original discussion concerned average counts and not resultant counts.

Mr. Thomas Thornley, an eminent authority in England in cotton spinning matters, in his book, "Cotton Spinning Calculations", page 281, writes:

"Care must be taken to distinguish between the terms 'average counts' and 'resultant counts' which are very different things. 'Resultant counts' is the term applied to the counts obtained when two or more yarns are doubled or twisted together. Suppose on the other hand two or more counts are used side by side in woven fabric without any thread losing its individuality; or suppose a spinning mill spins, or a weaving or doubling mill uses a number of different counts of yarn, then we may find the 'average counts' of yarn."

Fred Bradbury, B.Sc., F.T.I., another prominent British authority on textile matters, in his book, "Calculations in Yarns and Fabrics", page 47, writes:

"NOTE:—When *resultant counts* are required, the threads are supposed to be twisted together, whereas when *average counts* are required, it is assumed that the threads are contiguous in the woven cloth and retain their respective individualities."

In the normal way, equal weights of two different counts could not be twisted together as components of a ply yarn because there would be a surplus of length of the finer yarn. Neither would an equal number of uniform lengths of two different counts have equal weights. Under the latter conditions the average counts of 20s and 40s would not be 30s. This is in agreement with "CONTRIBUTOR No. 4022's" criticism in the April 1939 issue of COTTON of "CONTRIBUTOR No. 6779's" statement in the September 1938 issue to the effect that there was certainly no argument that one end of 20s and one end of 40s will average 30s.

If lengths and not weights of two different counts are equal, the lengths will have to be given their relative weight by some means in order to find the average counts. There are, of course, many arithmetical short cuts for finding average counts without actually finding the relative weight, but nevertheless the relative weight is indirectly, even if unconsciously, taken into account.

Thus, one could state the following case: 20s and 40s counts of yarn in equal lengths, find the average counts.

Rule:—When lengths of each count are uniform, let the count number represent the denominator of a fraction whose numerator is 1. Add up the fractions made up from each of the counts and divide the total by the number of ends or lengths. Divide the denominator by the numerator; the quotient equals the average counts.

$$1 \text{ end of } 20s = \frac{1}{20s} \text{ or } \frac{2}{40s}$$

$$1 \text{ end of } 40s = \frac{1}{40s}$$

$$2 \text{ ends of both} = \frac{3}{40s}$$

$$1 \text{ end of both} = \frac{3}{40s \times 2} = \frac{3}{80s} = \frac{1}{26.67s}$$

80 divided by 3 = 26.67s average counts.

No mention has been made of relative weights yet they have been indirectly taken into account as will be seen in the same example calculated on a basis of known length, say 840 yards for each count.

840 yards of 20s	weigh	1/20 Lb.
+840 yards of 40s	weigh	1/40 Lb.
1680 yards of both	weigh	3/40 Lb.
840 yards of both	weigh	3/80 Lb.

Average counts of 840 yards of yarns which weigh together 3/80 Lb. = 80 ÷ 3 = 26.67s average counts.

But if 20s and 40s are twisted together in the usual way, it being assumed that equal lengths of both counts are used in the ply yarn, the resultant counts will necessarily be coarser than the coarsest of the two components since weight per yard has been increased by the addition of another if lighter yarn, and in this case 840 yards of the resultant yarn would weigh the full 3/40 Lb. and the resultant counts would be: 40 divided by 3 equals 13.33s resultant counts, or by applying the rule as set down by "CONTRIBUTOR No. 6972" in the January 1940 issue of COTTON:

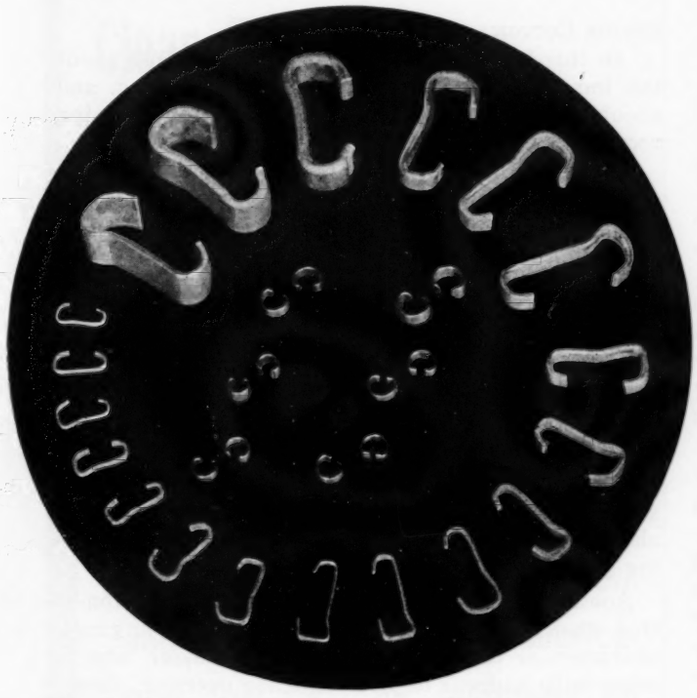
$$\frac{20 \times 40}{20 + 40} = \frac{800}{60} = 13.33s \text{ resultant counts.}$$

Thus we find that "CONTRIBUTOR No. 6972" has dealt exclusively with resultant counts which he has confused with average counts as required by "CONTRIBUTOR No. 4022" in the original case.

Therefore to revert to the original case, we could affirm that in a ply yarn whose components are 20s and 40s the resultant counts will be 13.33s and the

Readers wishing to review the entire discussion on figuring average counts will find the letters of those contributing to this subject in the following issues: January 1938 page 100; September 1938 page 94; April 1939 page 142; June 1939 page 108; and January 1940 page 89. Other articles that will be helpful in clearing up this controversial subject are the four articles entitled "The Basic Yarn Formula", appearing in the July, August, September and November 1938 issues of COTTON.

CARTER TRAVELERS



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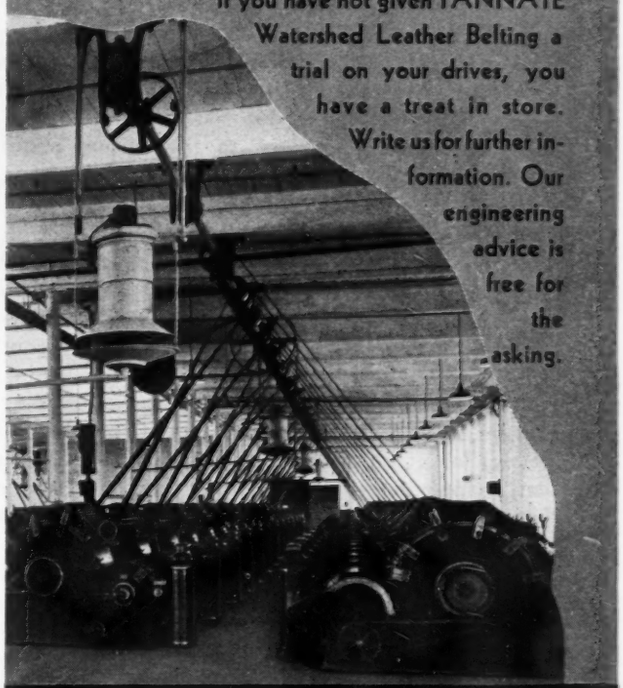

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average counts of the two yarns used is 26.67s. The foregoing only refers to commonly twisted yarns and not to fancy or spiraled yarns.

It is somewhat regrettable that the discussion should have created such controversy, but it is to be hoped that it has served some useful purpose.

CONTRIBUTOR No. 6778

Weave Room Regain and Air Conditioning

THE FOLLOWING questions were received by the editors of COTTON from a mill in South America. Before publication of the questions, they were shown to a southern cotton mill superintendent, and he has answered briefly, giving his own opinions. The purpose of carrying these questions in the editorial pages is to secure further answers for this South American mill. If readers are in a position to reply to the questions, address answers to the editors and they will be forwarded to this mill, without identifying the source.

1. Some weavers are of the opinion that 95 degrees F. and 75 per cent relative humidity, giving a regain of 10 per cent is to be preferred to a temperature of 85 degrees F. and a relative humidity of 74 per cent, giving the same regain of 10 per cent. In other words, their contention is that the actual humidity of 12.8 grains per cubic foot represented by the first set of conditions represents a better weaving condition than an actual humidity of 9.5 grains per cubic foot, represented by the second set of conditions, even though the regain in both cases is the same. What is your opinion?

Answer: "We prefer a dry bulb reading of 85 degrees with 80 per cent relative humidity. With our new weave room and modern air conditioning equipment we have been able to go as high as 85 per cent but several objections were found as we approached the saturation point."

2. Which regain do you consider the best for operating a cotton weave room, 10 per cent or 12 per cent?

Answer: "10 per cent."

3. Would the advantages of good running work at 12 per cent regain be sufficiently better, as to counteract the reduced labor efficiency which must necessarily result from the more disagreeable working conditions necessary to obtain 12 per cent regain.

Answer: "No!"

4. We would like to hear from any mills who may have installed air conditioning systems, as to the conditions of dry bulb temperature, relative humidity and percentage cotton regain, which they maintain in each of the carding, spinning and weaving sections. Also, we would appreciate knowing the results in increased efficiencies resulting from the air conditioning installation.

Answer: "We can speak only for our weaving since it is our only air changing department. Formerly our weaving had about 65 per cent relative humidity with the old wet down system, with average weaving efficiency of 75 per cent. Now we get approximately 85 per cent weaving efficiency with the new system.

Cotton Classer's Job

EDITOR COTTON:

In this letter I am going to give my views about the importance of cotton classing and grading, and about the selecting of a balanced mix at the opening room.

Since cotton classing is a masterful art, the classer of cotton must have a general idea of the various characteristics of the raw product in order to be of real value to his mill. A classer should have a fair working knowledge of spinning qualities of different varieties of cotton and cotton grown in different localities. Cotton samples similar in grade, staple, and general character have different drafting and spinning properties. Furthermore, one should know roughly the kinds and amounts of waste removed by the cleaning machines from each grade of cotton. Ability to act promptly in selecting mixes uniformly is of great importance to an organization. A classer should also know the essential necessity of blending and mixing properly.

Another reason for alertness in classing cotton is that when a change of stock is made, either in grade, character, or ratio of mix, the cotton classer, who in many mills happens to be the carding overseer, should make necessary changes and adjustments in his department so that the yarn numbers may remain the same as before the change. This is a very important decision to make so that the general quality of the work may not suffer. Obviously, the classer's value to an organization is determined by his promptness in detecting the various above-mentioned peculiarities of cotton and the extent to which they differ.

The United States Department of Agriculture has set up rules for grading and stapling cotton. Guided by these rules, the cotton classer or carding overseer focuses his attention upon a few factors which, to a certain extent, decide the yarn's quality. These elementary factors are: grade, length, strength, uniformity of staple, and character. The grade of cotton is settled largely by color, quantity, type of foreign matter, and preparation. Each grade carries a certain amount of waste. The lower grades, of course, carry a higher per cent of waste than the higher ones.

To illustrate the importance of grading more clearly, the writer has made tests on five bales of cotton separately. The grade of these bales ran from number three good middling to number seven low middling. It was found that the yarn strength among these testing bales of different grades varied as much as 5 to 15 pounds, although these bales were classed as one-inch staple.

The result of these tests signifies the importance of the proper selecting of a balanced mix in order to approach uniformity in the strength of the yarn spun. To obtain this uniformity, the cotton classer should

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make a record of each individual bale and point out the different factors in chart form. By doing so, the classer will be able to figure the different percentages of factors found. Even the best cotton classer in the country should have some sort of a record to justify his judgment.

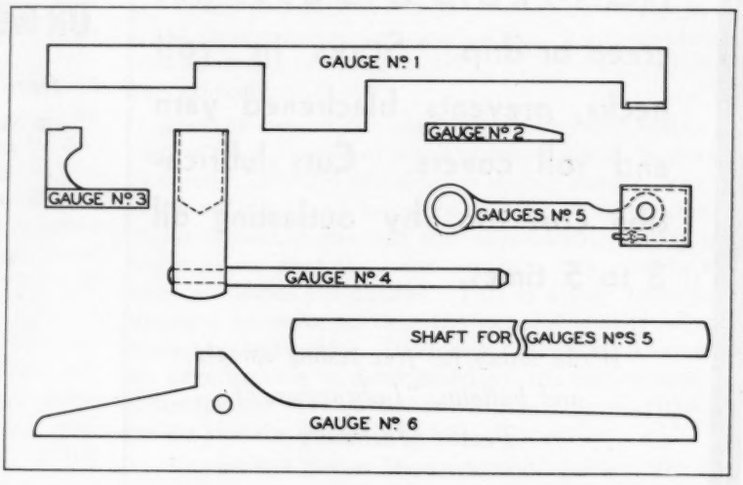
To demonstrate how this recording chart works, the writer explains an example. Let us assume that in a certain opening room of a mill the cotton being used is ninety per cent No. 5 middling one-inch staple and the other ten per cent is of lower grades of the same staple. Now we have a chart with the following items: let us say, grade number, percentage of foreign matter, preparation, length, strength, uniformity of staple, and character.

As you know, in most mills the number of bales per mix runs from 10 to 30. The average is about 20 bales per mix. Now we start classing and grading these 20 bales of cotton and, of course, writing down the picture of each bale in our chart. When we get through we find from the chart that there are two questionable bales. These two questionable bales are, apparently, of poor low grade and wasty. As a rule the lower grades carry more waste. This is when the cotton classer or overseer should use his keenest judgment in selecting the proper number of bales in a mix. This is easy to remember: the greater the number of bales in a mix the lower will be the percentage of wasty bales. The ideal number of bales per mix, the writer thinks, is 40 or more.

Well, probably some of you are saying at this time that this type of classing of cotton at the opening room is a job for a regular classer or something of the sort. If an overseer of carding of a plant cannot spend two minutes or less to find the history of each bale of cotton going through his machines—well, the writer prefers not to finish this sentence. Let us all remember WASH'S proverb. Says he, "When a man is placed over a department or a mill, it is not what he is able to do that counts, physically; his worth is from his neck up."

CONTRIBUTOR No. 7093

Lining the Loom Battery with Gauges



THE FOLLOWING inquiry was received by COTTON:

If one has no gauges to go by, what is the correct way to replace an old battery with a new one if the crank arms and the rocker shaft boxes are worn? This was submitted to Ivar Moberg who replied as follows:

In my opinion, a replacement of the old battery can not be properly done without gauges. Without gauges the work of replacement becomes a hit or miss proposition. I cannot strongly enough emphasize the inadvisability of attempting to set a battery without gauges. Unfortunately, unless an extremely poor job is done in setting the battery, the effect is more or less hidden when it comes to individual looms. For instance, suppose we replace a battery without the use of gauges. The loom will probably be watched for a week or so. If nothing happens within a week we probably will consider it a good job. As a matter of fact, that is no test at all. Even though the loom may run a month before making a bobbin breakout or a smash, the job would be a poor one. At this rate with one hundred looms we would have nearly 4 breakouts or smashes per day. This would, of course, be a ruinous number of breakouts which no mill could carry.

This reminds me of an incident occurring a number of years ago which I will never forget. We had some twenty Draper Model D looms which were badly stripped and in poor condition. The mill needed these looms and I was asked if they could be put in running order to which I replied in the affirmative, which was true. However, I undertook to do this job without using gauges. The looms were changed from two to six harnesses; the take-up motion was changed from low to high pick by adding two more gears; midget feelers, Stafford cutters, new batteries and various other new parts were applied. First we made a test on one loom only and when we started this loom up it was one of the sweetest running looms that I have ever seen. Day after day this loom ran uninterruptedly and many who came and looked at it were amazed at the result. It was, of course, immediately decided to proceed with fixing up the rest of the looms

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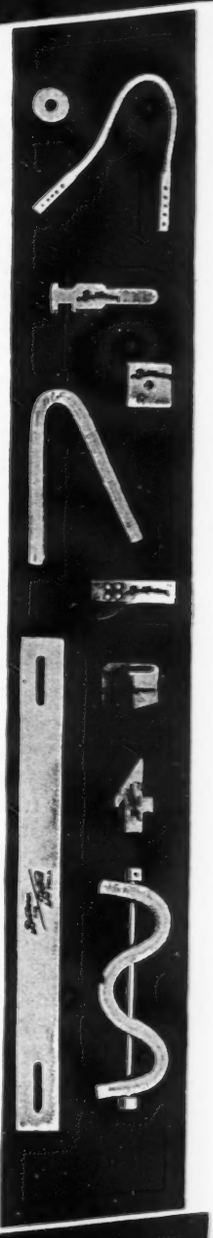

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in the same way. When the looms were ready to start on production a few weeks later Hades broke loose. Breakouts after breakouts, smashes after smashes, and crashes after crashes occurred daily. Every motion of the loom ran very well with the exception of the filling transfer motion, which was impossible. Had gauges been used the failure of the job would have been avoided.

Every mill should have a set of gauges for each type of loom. The gauges can be borrowed or bought from Draper Corporation. The accompanying sketch shows the various gauges used on Draper loom. Gauge No. 1 is used to check the square of the breast beam and height of the lay. Remove battery, box front, and box back, and place the gauge on the breast beam and center horn of loom side. Adjust the height of lay so that the center portion of the gauge will contact box plate, with lay on front center. Replace the box back and line it with the reed. Then use gauge inside of front horn on loom side. With all play taken No. 2 to get the distance between the box back and out in the crank arm bearings adjust the eccentric crank arm pins in the lay sword so that gauge will just fit in between them, with lay on extreme front center. Repeat this on other side of loom.

Gauges Nos. 3 and 4 are used simultaneously. With lay on front center place gauge No. 3 on the box plate and removing the thread placer, slip gauge No. 4 on the bobbin disc hub. Adjust the height of the battery so that gauge No. 3 will just go in under the lower edge of the battery stand and gauge No. 4 is just touching the box plate in a perpendicular position. Filing of the filing block on the breast beam and/or placing a plate under the battery stand may have to be resorted to in order to get the correct height of the battery.

Gauges Nos. 5 and 6 are also used simultaneously. Remove the transfer stud and insert shaft for gauge No. 5 in the hole so that it extends toward center of loom. Slip gauges No. 5, of which there are two, on the shaft and adjust the position of the battery so that the gauges will line up with the reed line. At the same time use gauge No. 6 to get lateral position of the battery. This gauge is placed on the box plate, in back of picker stick slot, and with the high portion against the outside of the bobbin disc adjust the lateral position of the battery so that the end of the gauge will be flush with the extreme outside end of the box plate.

All gauges are used with lay on front center.

Thoughtful Foreman

The other day one of our foremen came to me and said, "I've got an old fellow in my department whose health is really bad and who should not be working at all. While he is on the job he is an accident hazard both to himself and to others. But, he's the only one in the family working. It happens he has a husky son who is out of a job, and I have the idea that I might take the son on and let the old gent retire. I'm willing to put in the extra time to break the young fellow in. I think it's a lot better for the young fellow to be doing the work. The old man can't keep going much longer anyway, so if we give his son a job now we'll be making sure that his family will continue to have a bread-winner."

I thought this foreman had a good idea. It's an idea for every supervisor to keep in mind to apply in similar situations.—"*Management Information*", *Elliott Service Co., Inc.*

Squeakers

"The wheel that squeaks the loudest gets the most grease." This is an old saying, but it has a lot of truth in it. A man in a supervisor's job, however, has to guard constantly against doing the most for those who complain the most. It is very easy for a supervisor to neglect a quiet, industrious, and efficient person who goes along without complaint and simply because of his quietness it is assumed that he has no grievances and is perfectly satisfied.

My advice is to be just as quick to do things for the person who does not complain as for the person who complains chronically. We have to look for and anticipate the possible grievances of the man who does not complain. Usually, these are the men who are the very backbone of your organization.

Don't take the good man too much for granted, and continually do things for the grumbler "just to keep him quiet." —"*Management Information*", *Elliott Service Co., Inc.*

Just How Decadent Are We?

(*Continued from page* 56)

just plain old-fashioned hard work and lots of it. In a democratic country, where every man can carve out his own destiny, there will be enough brains, imagination and ambition mixed in with this work so that we won't have to worry about the future.

When Winston Churchill took office he warned the English people that he was offering them little besides "toil and sweat", those magic ingredients of success that seem almost forgotten in this modern world. We have much need of the same in this country, and have had need, to pull us out of this depression; yet in the past few years, work, as we once knew it, has been made illegal. We needed to work our way out of this depression and we haven't done it. We need desperately at present to work ourselves into a state of military preparedness. Unless we change a lot of the practices of the past few years, we probably can't do it.

On January 26, 1938, the following quotation from a London paper was inserted in the *Congressional Record:*

"The United States contains 6 per cent of the world's area and 7 per cent of its population. It normally consumes 48 per cent of the world's coffee, 53 per cent of its tin, 56 per cent of its rubber, 21 per cent of its sugar, 72 per cent of its silk, 36 per cent of its coal, 42 per cent of its pig iron, 47 per cent of its copper, and 69 per cent of its crude petroleum.

"The United States operates 60 per cent of the world's telephone and telegraph facilities, owns 80 per cent of the motor cars in use, operates 33 per cent of the railroads. It produces 70 per cent of the oil, 60 per cent of the wheat and cotton, 50 per cent of the copper and pig iron, and 40 per cent of the lead and coal output of the globe.

"The United States possesses almost $11,000,000,000 in gold, or nearly half of the world's monetary metal. It has two-thirds of civilization's banking resources. The purchasing power of the population is greater than that of 500,000,000 people in Europe and much larger than that of the more than a billion Asiatics.

"Responsible leadership which cannot translate such a bulging economy into assured prosperity is destitute of capacity. But pompous statesmen, looking over the estate, solemnly declare that the methods by which it was created are all wrong, ought to be abandoned, must be discarded, that the time has come to substitute political management for individual initiative and supervision."

Perhaps Herr Schickelgruber read this also, and, after watching our stumbling efforts to translate this "bulging economy into assured prosperity", has decided that we must indeed be a "decadent democracy".

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64. SKF in the Cotton Mills—24 page bulletin describing bearing installations for practically every machine in the textile industry including roller bearing spindle and tension pulley. SKF Industries, Inc., Philadelphia, Pa.

77. Bulletin S 200—Illustrating and describing the new Reeves Variable Speed Drive for spinning and twister frames, explaining its many distinct advantages and giving charted results of exacting tests. Reeves Pulley Company, Columbus, Indiana.

88. Dayton Cog Belt Catalog—A 32 page booklet full of vital information on power drives, plainly and simply assembled and arranged so that anyone can select the proper standard drive for any condition. It also provides data for the calculation of drives where acquired. The Dayton Rubber Mfg. Co., Dept. C-11, Dayton, Ohio.

110. 3-In-One Oil for Industrial Uses—showing the many industrial uses and advantages of this oil. A. S. Boyle Co., Jersey City, N. J.

116. Arcy—Telling in an interesting way the story of Arcy, which completely liquefies ordinary thick boiling pearl starch and its many advantages. Drake Corporation, Norfolk, Va.

117. Anti-Friction Bearings as Applied to Spinning, Drawing and Twisting Frames—This bulletin shows with detailed drawings how a simplified design of roller bearing applications is made to replace the plain babbitt bearings and lists the advantages that are gained. It deals primarily with better continuous production and in consequence freedom from equipment care and repairs. Hyatt Bearings Div., General Motors Corp., Harrison, N. J.

120. Goodyear Mechanical Rubber Goods Catalog—40 page catalog giving practical information and tables helpful in the selection of the proper belting, hose or packing to suit the requirements of the mill. Goodyear Tire & Rubber Co., Akron, Ohio.

139. Textile Detergents—Theory of the use of alkalis and control of pH—This 32 page booklet explains in simplified manner for the benefit of the layman the chemical processes that take place in using textile detergent in the finishing of textile goods. It contains many useful tables and data. Detergent Products Corp., Peachtree Bldg., Atlanta, Ga.

141. V-Belt Engineering Data Book—Over 50 pages of pertinent engineering information including data on selecting a V-belt drive design of special V-belt drives, numerous standard tables, charts and belt and sheaves list prices. Manhattan Rubber Manufacturing Div. of Raybestos-Manhattan, Inc., Passaic, N. J.

154. Johnson Bronze Bulletin No. 340—showing over 300 sizes Johnson general purpose bronze bushings. Johnson Bronze Co., New Castle, Pa.

155. Link-Belt Catalog 1574 on the P. I. V. Gear—giving details of this positive variable speed control. Link-Belt Co., 307 N. Michigan Ave., Chicago.

156. Link-Belt Engineering Data Book No. 125—showing features and giving engineering data on Link-Belt silent chain drive. Link-Belt Co., 307 N. Michigan Ave., Chicago, Ill.

157. Grading Rules and Complete Specifications for Laying and Finishing Maple Floors—Maple Flooring Manufacturers' Association, 1794 McCormick Bldg., Chicago, Ill.

163. Roto-Koner—Bulletin describing the new No. 44 Universal Winder, known as the Roto-Koner for winding knitting yarns, which has many new and distinctive features. Universal Winding Company, P. O. Box 1605, Providence, R. I.

164. Johnson Rotary Pressure Joints—Bulletin describing the rotary pressure joint which requires no packing, no lubrication and no adjustment, giving installation and maintenance instructions, types, sizes, dimensions and prices. The Johnson Corp., Three Rivers, Mich.

168. The Tube-Tex for Tubular Knit Goods—Bulletin describing this modern machine which extracts, processes, dries, conditions and folds in one continuous operation, lowering costs, saving labor, power, space and waste. H. W. Butterworth & Sons Co., York and Cedar Sts., Philadelphia, Pa.

170. Gates Textile Accessories—showing the increased efficiency and economy to be secured through the use of Gates cone belts, evener belts, card bands and loom binder cushions. The Gates Rubber Company, Denver, Colo.

171. Design of V-Belt Drives—48 page booklet full of valuable tables and data showing the type, number and design of V-belts that will give the greatest efficiency on each particular drive. The Gates Rubber Company, Denver, Colorado.

176. Sonoco Products—A 60 page illustrated booklet giving descriptions, specifications and charts of the many Sonoco products, including bobbins, cones, tubes, cork cots, roving cans, spools, rolls, etc. Sonoco Products Co., Hartsville, S. C.

184. Speed Control Handbook T-35—new reference book on variable speed control, said to be the most complete and helpful book on this subject ever published. 112 pages and more than 200 illustrations of interest to every production executive, purchasing agent, superintendent, overseer and master mechanic. Reeves Pulley Co., Columbus, Ind.

185. Dulux—The White Finish That Stays White—New book describing the new ten-point finish for factory walls and ceilings, the finish that stays whiter, stays cleaner and stands repeated washing. E. I. du Pont de Nemours & Co., Finishes Division, Wilmington, Del.

187. The Wildman Single-Head Full-Fashioned Hosiery Machine—Literature on request from the Wildman Mfg. Co., Full-Fashioned Division, Norristown, Pa.

188. Form 496—This form enables you to gather your own cost data on your sewing machines and determine whether new Union Special Machines will show big savings. Furnished free by Union Special Machine Co., 400 N. Franklin St., Chicago, Ill.

213. Saco-Lowell Cotton Machinery—Twisting—a 36 page illustrated brochure explaining the company's twisters and parts, including the four basic type twisters, features of new construction and general notes on twisting. Production calculations and specifications are included. Saco-Lowell Shops, 147 Milk St., Boston, Mass.

214. Saco-Lowell Cotton Machinery—Spinning—the second edition of a 56-page booklet, illustrated with the company's product and containing valuable charts, production tables and other spinning data. Saco-Lowell Shops, 147 Milk St., Boston, Mass.

218. Butterworth Electric Guiders—6-page folder describing and illustrating the new Butterworth Electric Cloth Guider. This guider is built on the same principle as the Foxwell Air Guider and is unexcelled for fast, accurate guiding. H. W. Butterworth & Sons Co., Philadelphia, Pa.

223. Alloyed Iron in Southern Industrial Fields—16 page illustrated catalog dealing with the properties available in modern cast irons. International Nickel Co., 67 Wall St., New York, N. Y.

224. "Tank Talk"—Sixteen page booklet of illustrations showing various types of elevated steel tanks, constructed and erected by manufacturers as well as stand pipes, reservoirs, storage and high pressure vessels, cylinders, along with helpful technical data. Also a list of what a few of the cotton mills, etc., said. R. D. Cole Manufacturing Company, Newnan, Georgia.

233. Catalog No. 22—an attractive illustrated catalog describing in detail the Shamrock shipping containers and the new canvas trucks for textile use. Meese, Inc., Madison, Ind.

234. They Stay Brighter Longer—This interesting illustrated booklet containing facts about Mazda lamps will be sent you free on request. General Electric Company, Dept. 166, Nela Park, Cleveland, Ohio.

240. The New Proctor Automatic Yarn Dryer—6 page illustrated folder describing the new Proctor automatic yarn dryer which has the exclusive new Proctor traveling skein protector. Proctor & Schwartz, Inc., Philadelphia, Pa.

253. Bown Air-O-Line Controllers — This booklet will prove invaluable to the men in charge of dyeing, finishing and slashing, as well as the textile executive. 32 illustrated pages describing the various Brown Controllers. The Brown Instrument Co., Philadelphia, Pa.

258. Automatic Overhead Cleaner for Spinning, Winding, Warping and Twisting—24 page booklet showing the new American MonoRail automatic cleaner in operation on MonoRail track circuit over Spinning, Warping, Winding, Twisting, etc. This cleaner incorporates a new scientifically designed blower producing a whirling column of air directed and controlled so that it prevents accumulation of fly with no harm to roving. The American MonoRail Company, Cleveland, Ohio.

260. Lubrication—This attractive booklet contains valuable and interesting articles on loom lubrication and also on spinning design and the function of spindle oils. The Texas Company, New York, N. Y.

261. The Brown Moist-O-Graph—16 page booklet describing the Brown Moist-O-Graph which measures, records and controls the moisture content of cotton warp yarns. The Brown Instrument Company, Philadelphia, Pa.

263. Gastonia Brushes—New catalog and price list showing the complete line of brushes for the textile mill. Gastonia Brush Co., Gastonia, N. C.

271. The New American Adjustable Diameter Wedgebelt Pulleys—illustrated leaflet describing the American adjustable diameter sheaves designed to produce the best performance in all types of V-belt driven textile machinery. American Pulley Co., Philadelphia, Pa.

272. Where to Buy Monel Metal Textile Equipment—Attractive booklet which lists the names and addresses of experienced fabricators of Monel Metal equipment for the textile mill. The International Nickel Company, Inc., 67 Wall St., New York, N. Y.

284. Morton Nickel Iron Quick Opening Handle Gate Valve—Illustrated leaflet describing the new Morton Valve for dyeing machines, pipe lines, steam and water lines, boiler blower valves and throttle valves. Manufactured in nickel, stainless steel and stainless steel trim. Morton Machine Works, Columbus, Georgia.

286. Triton W-30—Study of wetting agents and their activity with recommendations for textile processing. Rohm & Haas Co., Philadelphia, Pa.

289. Caustic Soda Bulletin—a data and reference book designed for the user of caustic soda. Complete with charts, drafts and formulas. Pennsylvania Salt Mfg. Co., Philadelphia, Pa., who also manufactures Hydrogen Peroxide.

290. Hyatt Roller Bearings on Textile Machinery of All Kinds—34 page booklet which describes and illustrates how Hyatt bearings are being applied to textile machinery. Hyatt Bearings Division, General Motors Corp., Harrison, N. J.

295. Fence Facts—A new booklet illustrating and describing chain link fence in a variety of styles and four different metals for every type of fencing installation. Also wrought iron fence in various beautiful styles. A concise handling of information for those wanting facts about fence. Page Fence Association, Bridgeport, Conn.

296. Full-Fashioned Hosiery Manufacture — Illustrated folder giving the history of full-fashioned knitting and describing in detail the different processes in present day manufacturing and the application of Gulf lubricants to the various machinery. Gulf Oil Corporation, Pittsburgh, Pa.

301. Norma-Hoffmann Bearings Catalog — Norma-Hoffmann Bearings Corp., Stamford, Conn.

305. Tannate Belting — leaflet describing Rhoads Tannate leather belts and their uses and advantages in textile mill operation. J. E. Rhoads & Sons, Philadelphia, Pa.

307. Lane Canvas Baskets—16 page illustrated booklet describing the Lane line of canvas baskets for textile use. W. T. Lane & Brothers, Poughkeepsie, N. Y.

308. Finnell Scrubbers—illustrated leaflets describing and giving specifications for the new Finnell floor scrubbing machines. Finnell System, Inc., Elkhart, Ind.

311. The Romance of Prairie Gold—attractive illustrated book which tells the story of corn and the uses of corn products in industry. Corn Products Sales Co., New York, N. Y.

312. Cork—The Modern Roll Covering—attractive booklet outlining the uses and advantages of cork for textile roll covering. Armstrong Cork Products Co., Industrial Division, Textile Products Section, Lancaster, Pa.

314. Winding Production Chart—this useful production chart can be used for any style of winder. Also included are instructions for figuring yarn takeup speeds. Universal Winding Co., Providence, Rhode Island.

315. How Handling Problems Have Been Solved—a 50-page booklet presenting in pictorial form many solutions to industrial handling problems and showing how they reduce costs, save labor, eliminate storage and provide free movement of stock between processes. American MonoRail Company, 13106 Athens Ave., Cleveland, Ohio.

317. Circular Knitting Machines—a fifty-two page illustrated booklet containing valuable information on the manufacture of transfer top hosiery. Includes illustrations of rib knitting principles, yarn changers, selvage welt, loose course and methods of laying in Lastex. Sent free on request to Fidelity Machine Company, 3908 Frankford Ave., Philadelphia, Pa.

322. The Application of Soaps and Soap Products to Textile Processing—40-page illustrated booklet covering the principal operations in textile processing. Special notes and suggestions are given for those operations requiring soaps or soap products. Colgate-Palmolive-Peet Company, 105 Hudson St., Jersey City, N. J.

323. Textile Processing with Artic Syntex A and T—50-page illustrated booklet describing the properties of these new materials and giving tentative or suggested formulas for a number of applications in textile processing. Colgate-Palmolive-Peet Co., Jersey City, New Jersey.

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CONTINUED FROM PAGE 109

327. **Sanforizing Machinery**—illustrated booklet describing the sanforizing machinery offered by the Textile Finishing Machinery Co., Providence, R. I. This bulletin is available only to finishing plants or executives thereof.

328. **SKF Ball and Roller Bearing Transmission Appliances**—84 pages, 100 illustrations, descriptions and dimensions of universal, unit, split and roller bearing pillow blocks, ball bearing drop and post hangers, take-up boxes. Suggestions and dimensional and load data for bearings also given. SKF Industries, Inc., Philadelphia, Pa.

330. **Tools for the Textile Trade**—a twelve-page booklet illustrating and describing specially selected tools for all textile mill departments—Loom Fixers, Spinning Room Fixers, etc. Snap-on Tools Corporation, Kenosha, Wisc.

331. **Unbrako Self-Locking Hollow Set Screw**—Bulletin Form 532 includes illustration and descriptive matter of this latest improvement in socket and screws. This bulletin also features the complete line of "Unbrako" Socket Screws. Standard Pressed Steel Co., Jenkintown, Pa.

332. **Hard Maple Flooring**—an 8½ x 11-inch folder featuring a close-up of Northern Hard Maple Flooring and specimen pieces to show grades, prepared for the convenience of architects, builders and others when considering flooring grade requirements. Maple Flooring Mfrs. Assn., 332 South Michigan Ave., Chicago, Ill.

333. **Fafnir Ball Bearings for the Textile Industry**—Outlining the applications and advantages of ball bearings on textile machinery. Fafnir Bearing Co., New Britain, Conn.

334. **Precision Winding for Silk and Rayon Yarns**—Describes the new No. 50 Leesona Winder and all attachments that are used for silk hosiery threads and rayon yarns. Universal Winding Co., P. O. Box 1605, Providence, R. I.

335. **Casters and Wheels**—192 pages, describing casters and wheels suitable for all types of industrial application. Every mechanical engineer and purchasing agent should have this. Darnell Corp., Ltd., P. O. Box 4027-N, Station B, Long Beach, California.

337. **Sizing and Finishing**—A pamphlet which will give the mill man an understanding of starch properties which will lead to greater efficiency in sizing and finishing. Stein, Hall & Co., Inc., New York City.

338. **Thickening Materials for Textile Printing**—Describing materials and methods employed in preparation of color thickening so that it may be properly and economically transferred to cloth through the medium of the printing machine. Stein, Hall & Co., Inc., New York City.

340. **Notes on Cotton Warp Sizing**—a 45-page handbook giving valuable data on the purposes and properties of various sizing products, their uses and preparation, with much information on the operation of slashing equipment. Will help solve many sizing problems. Address The Hart Products Corp., 1440 Broadway, New York City.

343. **SKF Better Spinning and Twisting**—16-page illustrated catalog containing technical information relating to construction and performance of SKF roller bearing spindles, tension pulleys, guide and idler pulleys and miscellaneous pulley and bearing applications. Distributed by all leading textile machinery manufacturers and SKF Industries, Inc., Front St. and Erie Ave., Philadelphia, Pa.

346. **Dependable Finishing for Modern Elastic Top Hosiery**—describing and illustrating equipment for basting and attaching insert elastic, attaching wide or welt elastic and seaming elastic in women's hosiery. Union Special Machine Company, 400 North Franklin St., Chicago, Ill.

347. **Rhoplex Resins**—Attractive folder discussing the outstanding properties of these Aqueous Dispersions with suggestions for their application to textiles. Rohm & Haas Co., Inc., Philadelphia, Pa.

348. **Johnson Ledaloyl Bearing Bronze**—Illustrated booklet telling the complete story of Johnson Ledaloyl Bronze, the newest development in self-lubricated bronze for textile bearings and bushings. Johnson Bronze Company, New Castle, Pa.

349. **Preview**—12 page illustrated booklet describing the Best Universal Locking System which features the interchangeable core and offers a solution to locking problems. Best Universal Lock Co., Indianapolis, Ind.

350. **Theoretical and Applied Silk-Soaking**—Attractive 28-page booklet outlining methods of silk-soaking and outlining investigations on the soaking, backwinding and degumming of silk. Hart Products Corp., New York City.

351. **Wetsit**—Leaflet describing Wetsit, a synthetic aromatic compound with excellent surface tension reducing properties; gives rapid wetting out and thorough penetration; available in three strengths. Jacques Wolf & Co., Passaic, N. J.

352. **Lupomin**—Leaflet describing Lupomin, a new cation active softening agent for all textiles but especially acetates and rayon crepes; odorless, permanent and easily applied; imparts soft, full feel. Jacques Wolf & Co., Passaic, N. J.

353. **Luposec**—Leaflet describing Luposec, a waterproofing agent with great stability; soluble in cold or warm water at all temperatures; suitable for all fibres and especially effective in splash-proofing silk hosiery. Jacques Wolf & Co., Passaic, N. J.

354. **Vacuum Cup Pulleys**—Leaflet describing the new Vacuum Cup Pulley which gives greater production, less power cost, less maintenance cost, and much longer life to belts and bearings. Vacuum Cup Metal Pulley Company, Inc., Detroit, Mich.

355. **Air Conditioning in Cotton Spinning**—A technical discussion of the need of adequate humidification and controlled air change in the spinning room of the textile mill of today. As for Bulletin 539. Parks-Cramer Co., Fitchburg, Mass., and Charlotte, North Carolina.

356. **Parks Textile Specialties**—A 14-page bulletin with brief descriptions of the Parks line—Automatic Airchanger—Central Station and Unit Air Conditioners—High Duty, Turbo and Turbomatic Humidifiers—Automatic Regulation—Traveling Cleaners—Portable Dustless Card Stripper—Humidifier Valves and Accessories. Parks-Cramer Co., Fitchburg, Mass., and Charlotte, N. C.

357. **Caro-Gant**—The Original 100% Active Warp Dressing. Attractive folder describing Caro-Gant the Warp Dressing that makes stronger more elastic warps with a maximum breaking strength and a minimum reduction in elasticity. Hart Products Corp., New York City.

358. **Rhonite Emulsions**—Attractive bulletin describing the Rohm & Haas complete line of Urea Formaldehyde Resins for Textile Finishing. Rohm & Haas Co., Philadelphia, Pa.

361. **Thaumaphos** — The textile detergent — Seven page booklet describing Thaumaphos, the wonderful phosphate. Included is a list of the Thauma brands and a survey of their uses in the wet finishing of textiles. Detergent Products Corp., Atlanta, Ga.

362. **Leather Belting Calculator**—Handy and attractive calculator for determining belt speeds, horsepower per inch of belt widths, etc., will be sent free on request. J. E. Rhoads & Sons, Philadelphia, Pa.

363. **Form 769, Condensed Catalog**—a 40 page pocket size booklet illustrating and describing sewing machines adaptable for practically all phases of the needles trade. Willcox & Gibbs Sewing Machine Co., 658 Broadway, New York City.

364. **The Superlock—Form 828**—an attractive two-color illustrated 6-page folder describing the "Fastest Overseaming Machine in the World." Willcox & Gibbs Sewing Machine Co., 658 Broadway, New York City.

365. **Catalog No. C-306**—a 32 page Standard Conveyor booklet showing numerous actual installation photographs on roller, belt, slat, chain, wheel, live roller, push bar and vertical lift conveyors—also spiral chutes, tiering machines, portable pilers, lowerlifts, record lifts and pneumatic tube systems. Standard Conveyor Co., North St., St. Paul, Minn.

366. **Houghto-Size SR**—Leaflet describing a new sizing compound for spun rayon warps which provides high breaking strength, greater elasticity and increased weave-room production at low cost. E. F. Houghton & Co., Philadelphia, Pa.

367. **Rayon Oils**—Leaflet describing three Houghton products used for throwing rayon filling yarns for weaving, as softeners in gelatin and similar solutions used for sizing and as softening oils for yarns, knitted and woven fabrics. E. F. Houghton & Co., Philadelphia, Pa.

368. **Surfax W.O.**—Leaflet describing a new surface-active chemical which possesses unusual wetting out and softening properties. E. F. Houghton and Company, Philadelphia, Pa.

369. **Lunkenheimer Catalog 78**—136 page catalog describing a complete line of Bronze, Iron and Steel Valves, Boiler Mountings, Lubricating Devices, Air Devices and other specialties. Also included is a section on the thermo-dynamic properties of steam, and a table of shipping weights. The Lunkenheimer Co., Cincinnati, Ohio.

370. **Notes on Exsize**—Attractive new booklet describing the use of Exsize for desizing fabrics. Included is a review of general sizing and finishing and a flow chart showing the cotton and rayon finishing processes. Pabst Sales Company, 221 North LaSalle St., Chicago, Ill.

371. **Aluminum in the Chemical Industry** — Published by Aluminum Company of America. Fifty-two pages. Text and illustrations covering adaptability of aluminum and aluminum alloys to chemical industry applications and characteristics governing recommended uses. Aluminum Company of America, Pittsburgh, Pa.

372. **Stewart Fences**—Illustrated catalog which is a complete text on the subject of fence for industrial uses. Stewart Iron Works Company, Inc., Covington, Kentucky.

373. **The Bowen Spinner's Record Book**—Handy leather bound notebook which contains a world of useful information as well as tables for keeping accurate spinning data. U. S. Ring Traveler Company, Providence, R. I.

374. **Fidelity Spooling Machines**—Illustrated booklet describing the Fidelity Spooling Machine and outlining its many applications in the textile industry. Fidelity Machine Company, Philadelphia, Pa.

375. **The Fidelity 3 Carrier Back Winder**—Folders describing this new backwinder which is used to recover silk in press-offs from full fashioned three carrier leggers. Fidelity Machine Co., Philadelphia, Pennsylvania.

376. **Leather Booklet No. 202**—Attractive booklet illustrating and describing BONDARON Special Tanned Leather as used in various forms such as Check Straps, Pickers, Harness Straps, Lug Straps, Bumper Straps, etc. Also describes BONDARON Special Tanned Solid Round Leather Belting, Flat Belting and Standard Oak Tanned variety of Leather Belting. Chas. Bond Co., Philadelphia, Pa.

377. **The Morton System**—Illustrated literature describing the Morton Improved double circulating raw stock dyeing and bleaching machine, the Morton horizontal revolving beam and package dyeing machine and beam bleaching machine, the Morton vertical package and roving dyeing machine. Morton Machine Works, Columbus, Ga.

378. **The Victor Circle-D Traveler**—Pamphlet describing this important advance in traveler design. Victor Ring Traveler Company, Povidence, R. I.

379. **Tensometer**—Leaflet describing the Tensometer —the new handy device for testing the tension in warping, winding and quilling. Sipp-Eastwood Corp., Paterson, N. J.

380. **Ruler and Conversion Table**—converting decimals of inch to millimeters or vice versa. Useful to knitting mills. Thomas & Skinner Steel Products Co., Indianapolis, Ind.

382. **Warp Sizer for Spun Rayon**—12 page booklet illustrating latest methods in sizing rayon staple. Charles B. Johnson Mach. Works, Paterson, N. J.

384. **Spun Rayon Weaving**—Valuable authoritative booklet that discusses in detail the successful and proper methods for weaving spun rayon fabrics. Crompton & Knowles Loom Works, Worcester, Mass.

385. **Sewing Machines**—Illustrated technical booklets on high speed lock-stitch sewing machines for all types of work. Singer Sewing Machine Co., 149 Broadway, New York City.

386. **The Xynomines**—36 page book describing the theory and practice of wetting out and scouring for the dyer and textile technician. Onyx Oil & Chemical Co., 15 Exchange Place, Jersey City, N. J.

387. **Phi-Sol**—32 page book describing the latest scientific developments and thoughts on dye assistants and penetrants. Onyx Oil & Chemical Co., 15 Exchange Place, Jersey City, N. J.

388. **Key Products for Textile Industry**—22 page leaflet describing textile specialties used in dyeing, bleaching, and finishing as applied to Southern textile industry from Southern plants of American Cyanamid & Chemical Corp., 822 West Morehead St., Charlotte, N. C.

389. **Fibre Conditioning with Texspray Compound**—30 page booklet on treating of cotton or cut staple fibers with Texspray Compound including the advantages and development of fiber conditioning. The Texas Co., 135 E. 42nd St., New York City.

390. **Yarn Conditioning and Twist-Setting**—Tenesol booklet on new conditioning agent for textile yarns. Burkart-Schier Chemical Company, Chattanooga, Tennessee.

COTTON, Grant Bldg., Atlanta, Ga.

Please send me, without obligation, free booklets described in the September 1940 issue of COTTON.

(Fill in here numbers you select from both pages).....

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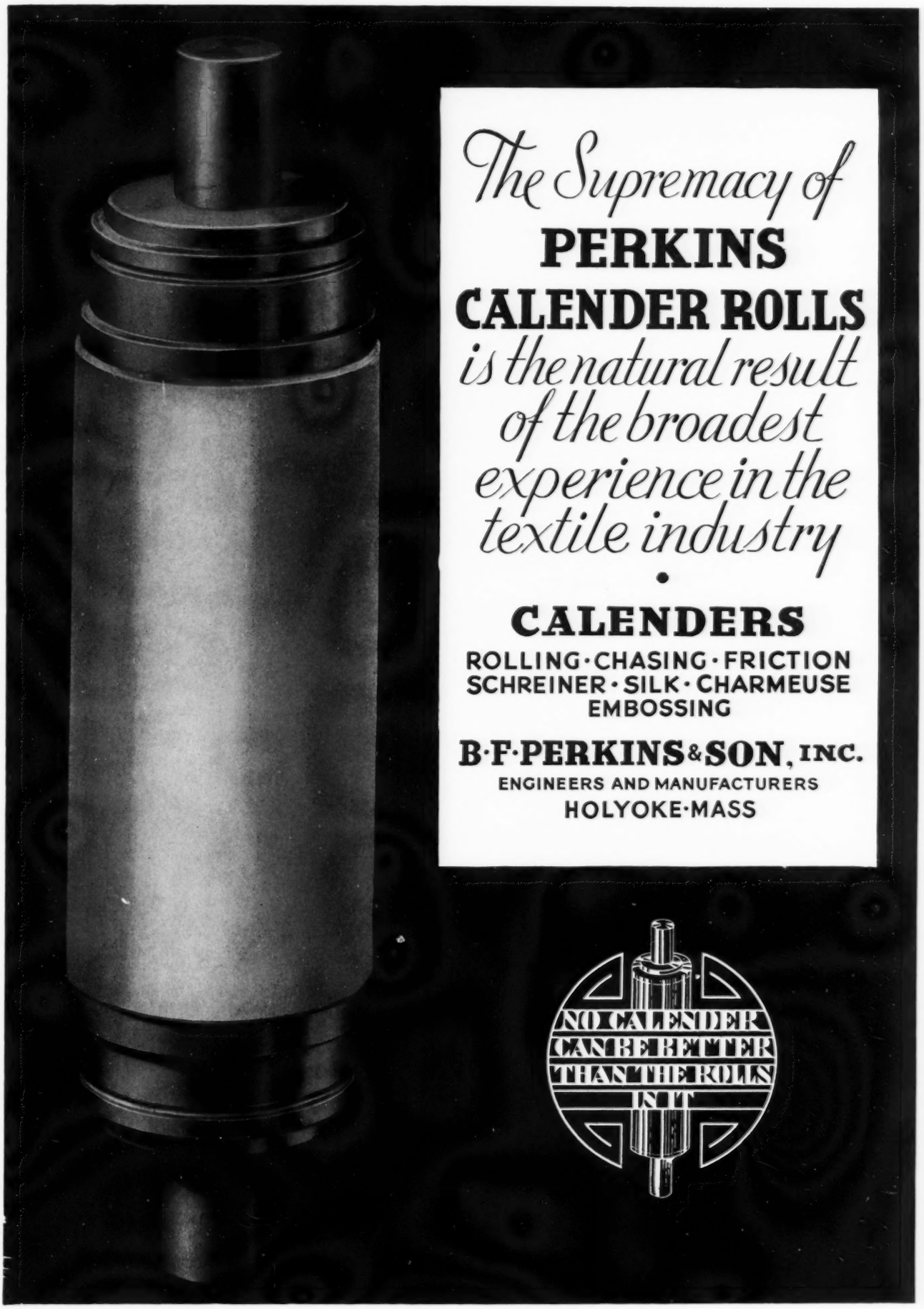
Please be sure to fill in your Firm's Name and your Position on the Coupon. This service cannot be extended to you unless this information is furnished.


The Supremacy of
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CAN BE BETTER
THAN THE ROLLS
IS IT

KNITTING CIRCULAR

Everywhere in the New York stores you will see interesting new novelties in hosiery—especially in the sports line for women and girls, and for men, too. This would seem to indicate that the coming fall should be an excellent season for novelty merchandising.

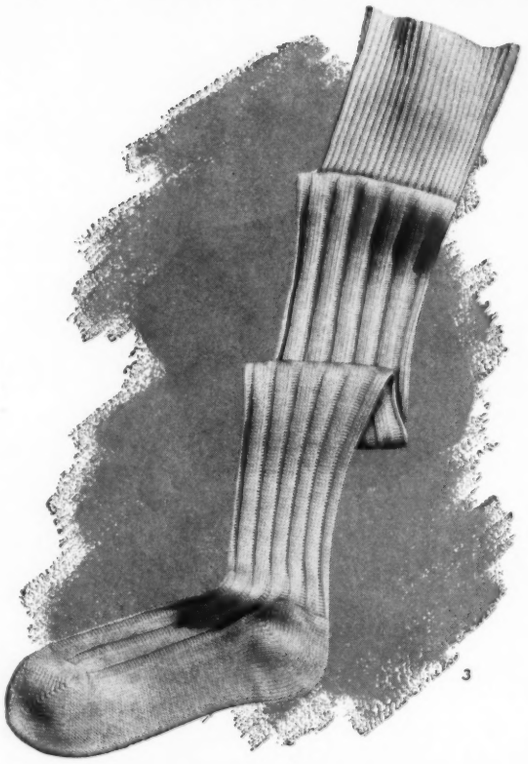
Typical of the trend is a two-piece sock, No. 1, from Bonwit Teller—of white wool banded with Kelly green. This is featured on the cover of the August 15th issue of VOGUE. Illustrated is a simple tuck pattern—but this item can be made in a rich variety of patterns in the instep as well as the leg on the Komet Links-and-Links Machine.

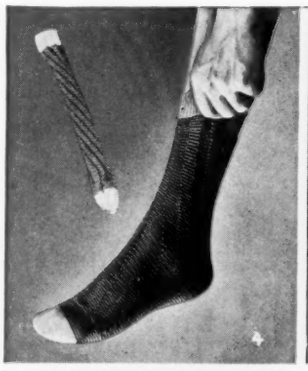
The "slipper sock", No. 2, is another extreme novelty, many types of which are now appearing. Shown here is one with blue corduroy toes and heels and an instep and leg of red wool with a design similar to a cable stitch. The "slipper sock" sold well last winter for wear after skiing. This year it is thought that college girls will take it up for lounging and for wear under rubber boots.

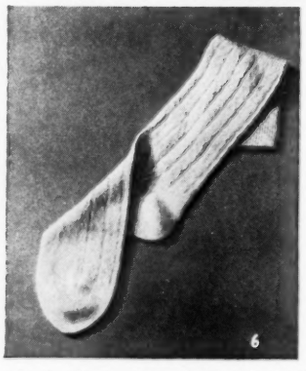
Interesting, too, is the full length red wool campus sock, No. 3, produced by Tricamp. It will be sold by Abercrombie & Fitch and Lord & Taylor for wear with the knee-length skirt for skating and other outdoor sports. Tricamp says that full length socks like this have been worn for some time by the very smartest French women, and offer definite possibilities for merchandising here.

A flecked tweedy-looking high sock, also from Tricamp, is shown in illustration No. 5. This is made of block dyed yarn on the regular Komet Machine. Shown with it is a white high sock—a Sarfert item expected to be extremely popular this fall.

The first two-color heelless sock to appear on the market is the man's swivel sock in brown and beige, No. 4. This and the beautiful chevron-patterned sock, No. 6, shown below it—a camel-colored Links-and-Links of rayon, rabbit's hair and wool—are also from Sarfert Company.







Obviously, those manufacturers equipped with machines that produce **both** novelty hosiery and the regular "bread and butter" staples will be in the best position to cover market demands effectively. This is exactly the value of the S & W Komet Links-and-Links Machine. It is a versatile machine that makes many staples, and can be switched at any time into the production of novelties of a widely diversified character, including all of the newest illustrated on this page. Our staff will be glad to give you complete information about this and other S & W machines.

"THIS IS THE SCOTT & WILLIAMS MACHINE AGE"

SCOTT & WILLIAMS, INC., 40 Worth Street, New York, N. Y.

Established 1865

KNITTING SECTION

Dear Boss:—

DEAR BOSS:

I've been working for you now for about five years without any trouble, but there's some things going on in your mill that I think you ought to know about, so I'm going to straighten these things out by writing you this letter. Writing letters isn't easy for me, Boss, but I always heard that you don't like the "help" running into the office, wasting your time with petty complaints, so I was a bit scary about coming in to see you. But maybe after you read this letter, you and me will get to be better friends; then in the future we can talk things over like we ought to and that will save both of us a lot of trouble. So here goes the fireworks. . . . .

Boss, the other morning I got up at 6 o'clock as usual; my wife packed the usual lunch which cost about $.25; I drove to the mill (ten miles from my house) fully expecting to do a full day's work. Imagine how I felt when, after working an hour, the foreman told me to go home, explaining that we had run out of silk.

I had earned exactly fifty cents in that hour, Boss, which is less, including the cost of driving, than it cost me to come to work. Do you think that's fair? It don't make any sense to me, because I think that the foreman should have known the day before that we were going to run short of silk, and should have told me not to come to work. That would have saved me time and money, and would have certainly made me feel that the foreman was working for my best interests, which is as it should be.

Then there's the time I came to work ten minutes late, and the foreman bawled me out before letting me explain why I didn't get in on time. Nobody bothered to find out why I was late, that wasn't important. The important thing was that I had been tardy. It didn't matter that my kid was sick, and that I had been up half the night with him, which is why I overslept that morning. No, nobody cared a hoot about that, but maybe if they'd of bothered to find out, and then would have given me a little sympathy and a pat on the back, I'd of thought that my boss understood such things and I'd of also thought that he was a pretty good guy. As it is, I just have one more little chip on my shoulder.

And Boss, when I go to the foreman to complain about anything, he just gives me a "dead pan" look, then sets about giving me hell for always being dissatisfied, when he should listen to my side of the story and then try to set me straight on the matter. If he'd do that, Boss, I'd think that he was really working with me, and not against me . . . which is what I think now.

And look, Boss, why don't you put the foreman wise that he ought to get to know us boys by our first names (might be a good idea for you to do that too, Boss). For you see, the average fellow in the plant is a pretty friendly cuss, and he responds to friendly treatment. I know that when the foreman addresses me with a "Hey, you!" something inside me tightens up and I become hostile in my attitude, which certainly doesn't make for smooth labor relations. And we need plenty of friendly labor relations these days, Boss.

And here's another thing that gets under my skin. I've worked here for a number of years and feel that I'm a bit more a part of the place than the fellow who has only been working here for a short time. I also think that my seniority should entitle me to consideration in the matter of getting the best styles to run, also a little more work when things get slack. Favoritism towards employees whom you may like better than me shouldn't be practiced in our mill, Boss. For I'm going to resent that sort of thing and feel that my years of loyalty haven't "paid off". Yes, I'll even probably adopt a "what the hell" attitude towards you and the mill, and that might mean future trouble for both of us. Think it over, Boss.

By Caswell Clifton

Then there's the matter of me being a human being, ambitious and working to get ahead. Boss, there's nothing pleases me better than to think that I'm a better workman than some of the other fellows in the mill, so why don't you give me a chance to show that I have something on the ball. Maybe I have some good ideas up my sleeve; maybe I try to tell the foreman about my ideas and he simply adopts the attitude that I'm trying to run his job; maybe he just passes my ideas up with a shrug. I believe, Boss, that if you'd find some way to reward me for new ideas, and give me a chance to present them to you, I'd think that you were a pretty swell guy, and I'd be right in there giving you all I have. Try this out, Boss, I believe that it will pay you.

Following, are a few other things that I don't like: For instance, when pay-day comes on a holiday, don't pay on the day after the holiday. Pay me one day before and make me feel good. . . . Don't make deductions off my pay for bad work that I never get a chance to see. . . . And that bonus system that you've installed; I mean the bonus that it's almost humanly impossible to earn. . . . Losing a few hours time changing styles, and not getting paid for the time. . . . Penalizing me for bad work, and not rewarding me for

good work. . . . The foreman riding me for mistakes instead of explaining and showing me how I can mend my ways and become a better workman. . . . Making me walk to distant parts of the mill for silk, yarn, needles, etc., when it's an easy matter to keep these things in a handy place. . . . Overcharging me for needles because you think that this is a good method to keep needle breakage down to a minimum. . . . And don't try to start an employee group in the mill with your known favorites at the head. This might make me suspicious of you, especially if the foreman tries to scare the hell out of me by telling me what will happen if I don't join up.

Boss, I've tried to tell you in this letter about the things that can be corrected to make me a supporter of yours. Loyalty, you know, is a thing that you can't tell me about, or force me into. . . . I must feel it. And I know that if you'll just put forth one little extra ounce of effort in this direction, I'll learn to think that you're a regular guy and I'll want to give you my best, and then . . . I'd like to see anybody try to come between us. Just treat me with a little more consideration, make me feel that you're giving me a square deal, and we'll get along swell. And that's an easy plan to adopt, Boss.

Well, that's all, Boss, and I hope this letter will help to make you the man I think you ought to be.

Loyally yours,
Employee No. 1.

Finishing Circular Knit Goods

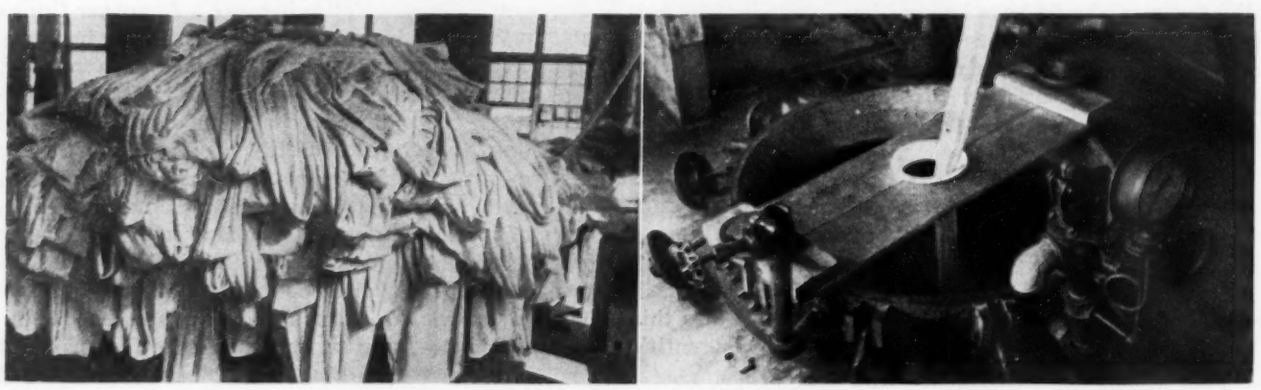
(*Article 2: The Kier Boil and Chlorine*)

• This is the second of a series of articles on the finishing of circular knit goods, as prepared by a practical mill man. The first installment, which appeared in the August issue, covered the quick bleaching of fabrics on the open tub. This article discusses the use of the kier boil and chlorine. The next will take up the bleaching of knit goods with peroxide.

AS WILL no doubt be observed, bleaching circular knit goods by the use of the kier boil and chlorine does not differ greatly from the process used on woven goods for the same purpose. There are, however, several variations which will be brought out. This process is used when the lot of goods to be bleached which weighs more than 1000 pounds or too much to be bleached on an open tub. [For bleaching by open tub see August COTTON.] Then too, a little more time is required to complete the kier boil method of bleaching and this will have to be considered. This is a "production" process and the cost on it is much less than for bleaching on the open tub. Due to the strong caustic boil this process gives the most harsh hand or feel of any of the three methods.

In order to get continuous running the entire lot of goods to be bleached is made into one piece. This is accomplished by sewing the ends of successive pieces together. Knit goods come to the bleachery in the form of rolls, which vary from 25 to 85 pounds in weight and from 12 to 30 inches in width. The length depends on the weight of the goods per unit of length. To increase the ease of running, goods of as near the same construction as is possible are run together.

When the lot of kier load consists of goods of varying weights, it is best to begin with either the heaviest or the lightest and gradually work to the other extreme. This greatly improves the running over the kier loading equipment and will also improve the running on the reel tub when the goods are being washed out. In preparing the goods each piece is pulled from its roll by a pair of wooden rollers suspended from the ceiling. The goods drop into a large box (capacity 1200 to 1800 pounds of dry



Left, goods piled in/on box to be bleached in the kier. Right, pulling goods from kier after boil-out.

"... and sales are on the increase since we began knitting with TMW Needles."

Goods passing through J-box containing bleaching solution

goods) placed under the rollers. This, of course, necessitates stopping when each piece is pulled off its roll so that the last end of this piece may be sewed to the outer end of the next piece. If the goods were folded in the same manner as are woven goods, they could be "laid out" and all the sewing done at one time. When loading or souring is begun the ends of successive boxes are sewed together thus forming one continuous piece.

The Kier

The most common type kier is a large cylindrical kettle with rounded ends and of greater height than in diameter. The size is usually expressed in terms of the capacity of cloth load. Two and four-ton kiers are common sizes. An iron grate forms a false bottom in the kier on which the cloth is piled, the space under this bottom acting as a well in which the liquor collects for recirculation through the goods. There is a large opening in the center of the top for loading and unloading the kier. This opening is closed by a massive cast iron cover and may be secured by several large bolts. A centrifugal pump forces the liquor from the bottom of the kier up through the heater and out through the spray in the top of the kier. The heater is a cylinder of the same height as the kier and about two feet in diameter. Inside are flues similar to those in a steam boiler. Live steam is circulated around the flues while the kier liquor circulates through the flues. This is a very efficient method of heating the liquor without dilution as would be the case were live steam introduced into the kier.

Brown Sour

Although knit goods contain no size compounds, it has been found that a souring with a dilute solution of sulfuric acid (used on woven goods to break down the size) greatly improves the shade obtained. Besides wetting out the goods thoroughly, which is essential, the natural impurities of the cotton seem to be broken down to a certain extent by the action of the acid. The goods are pulled from the box by a reel and dropped into a J-box containing the acid solution. This solution should be kept at a specific gravity of from ½ to 1 degree Twaddle by checking frequently with a hydrometer.

As the goods are passed from the sour box the excess liquid is squeezed out and the goods piled in a pit. There is no definite length of time for the goods to remain in this condition for the action of the acid is fairly rapid. Loading the kier is usually begun as soon as the entire lot has been passed through the solution. The important thing is not to allow the goods to dry out with the acid in them as this would cause tendering.

Loading the Kier

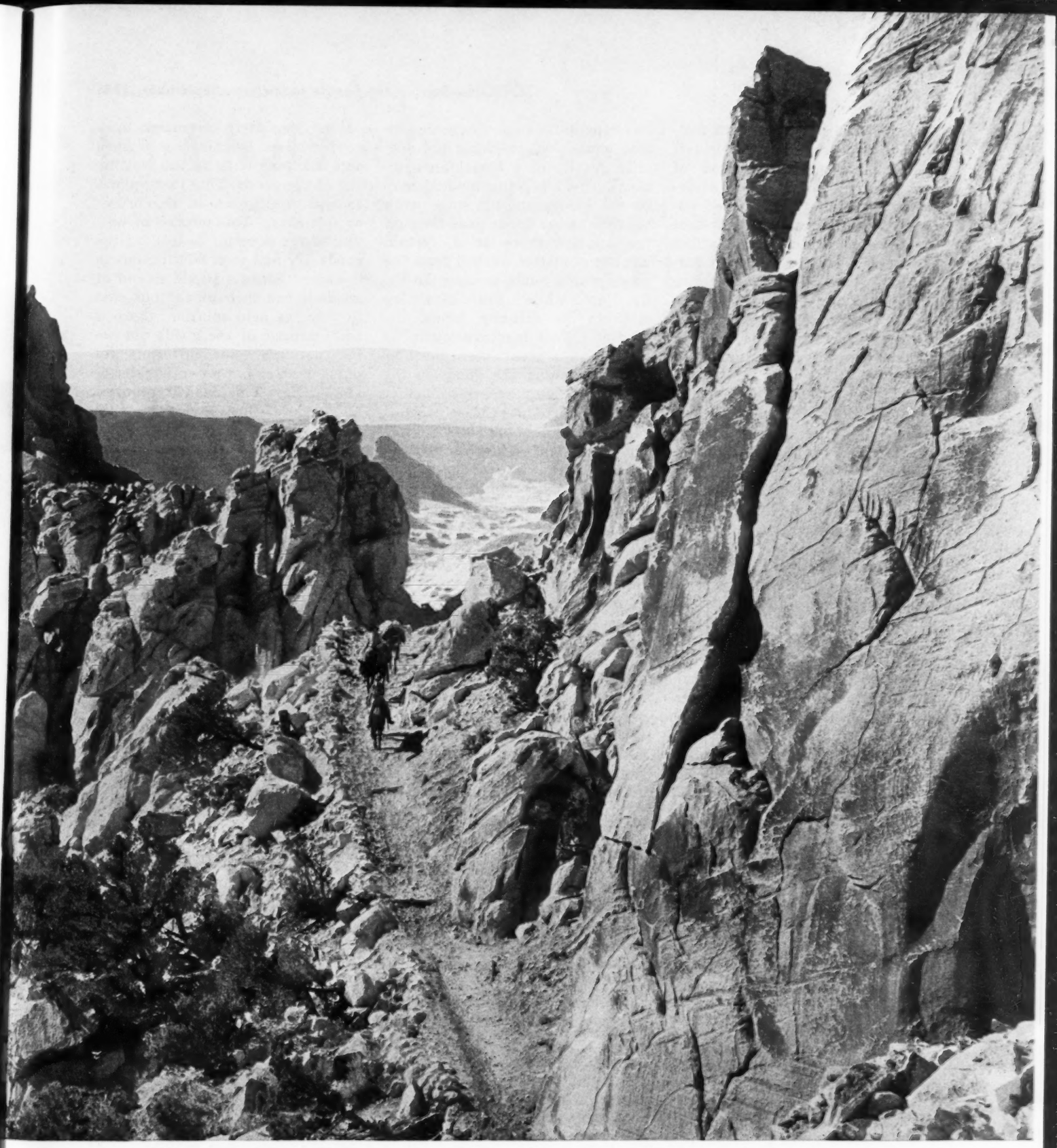
The goods are pulled from the sour pit by a washer which consists of a pair of rubber rollers in a horizontal position over a tank about 20 feet deep. There is another roller in the bottom of this tank under which the goods pass. In the case of woven cloth, the goods pass under this bottom roller several times in moving from one end of the washer to the other. This is not advisable for knit cloth, however, for there is a certain amount of stretching between the squeeze rollers and the bottom roller. To eliminate this or to prevent too much stretching, knit goods are only passed under the roller once, through the squeeze rollers and out of the washer.

From the washer the goods are passed into a J-box containing a weak solution of sodium carbonate to neutralize the acid left in the cloth. Were this not done the acid would react with the iron of the kier injuring the kier as well as the cloth. Automatic kier pilers are used successfully in most kiers. Results from kier to kier will be much more uniform when a piler is used, though a kier may be loaded or piled successfully by hand. Water used with the piler helps settle the cloth down as it is piled, thus increasing the amount that can be loaded into the kier. It is not necessary to tie the goods down in the kier because the boiling is done without pressure.

Boiling the Goods

Boiling out knit goods is not nearly so troublesome as is boiling out woven goods. There are, of course, several reasons for the difference, some of which will be brought out. The construction of the goods is the most important difference. Knitting yarns are of necessity spun with as little twist as is possible. This naturally gives a much softer yarn which is more easily penetrated and cleaned. The fabric itself is of loose construction as compared with woven goods. The absence of sizing materials in knit goods is another important reason for the comparative ease with which a good boil out may be obtained. Knit goods are never bleached in this manner prior to dyeing. This is cause for much concern with woven goods and is another reason knit goods boiling is much simpler.

After the kier is loaded the



"He who wishes to know the road through the mountains must ask those who already traveled it"
CHINESE PROVERB

In a 40-hour week the new READING high-production twenty-six section forty-five gauge full-fashioned knitting machine produces 97 per cent more volume and 116 per cent more value than the ordinary twenty-section forty-two gauge machine . . . *And remember: Money invested in modern machinery not only pays big dividends of itself but also serves as insurance for your total investment.*

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cover is put in place but not fastened down. The air vent is left open throughout the period of boiling since no pressure is desired. Were the goods boiled under pressure a decrease in weight would result which would affect the weight of the finished garment too much. This would necessitate changing the constructions of all the various styles. Then, too, a satisfactory boil is obtained without pressure for reasons stated previously.

The kier charge consists of 3 per cent caustic (on dry weight of goods) and 1 per cent tri-sodium phosphate. This is mixed and dissolved in a tank connected with the kier. The amount of the entire charge should be only as much as is needed to give good circulation. This may seem to be very indefinite rule but works well even on loads of varying weights. It adds up to this; an amount of liquor is necessary to fill the goods plus enough to fill the circulation equipment. Since different amounts of goods naturally hold correspondingly different amounts of water, the ratio on different loads will be very near the same. The charge is circulated through the goods at the boil for about 10 hours, and when the boiling has been completed, the charge is dumped out and the goods washed down by running cold water through the kier with the drain open.

Bleaching the Knit Goods

The goods are pulled from the kier by a pair of squeeze rollers, pass over a reel and are piled in the J-box containing the bleaching solution (sodium hypo-chlorite). This solution varies in strength according to the weight and construction of the goods being bleached. On the average range of styles this strength should vary from 2 to 3 degrees Twaddle. This is a very flexible point in the process, however, and can be changed to suit the particular case. As the goods pass through the solution some of the solution and strength of it is removed. This necessitates checking the specific gravity of the solution with a Twaddle hydrometer frequently and adding the necessary amounts of chemic and/or water. There has been quite some discussion on this method of checking the specific gravity of a bleaching solution. The foregoing method may be too inaccurate for some work because as the goods pass through the solution there is a certain amount of matter washed from the goods which tends to keep the Sp. Gr. up while the bleaching strength is actually being decreased. This inaccuracy can be removed to a great extent by thoroughly washing the goods in the kier. The most accurate manner would be to titrate the solution at regular intervals instead of checking the Sp. Gr. This latter method would run into complications for the bleacher would have to do most of this work and should not confine himself to so small a task.

The goods pass from the bleaching bath through a pair of squeeze rollers and are piled into a pit and there allowed to bleach. At least three hours in the pit is necessary for a good bleach and up to 6 or 7 hours is helpful and desirable when the time is available. After bleaching, the goods are usually soured and finished within 12 to 20 hours after bleaching. This is not essential, however, just so the goods are not allowed to dry out with the bleaching solution.

Finishing

Up to this point all the operations have been carried out in the bleachery on equipment regularly used for woven goods. From this point on the knit goods equipment is used to finish the goods. When bleaching has progressed far enough the goods are pulled from the pit into small boxes, each with a capacity of from 3 to 6 pieces of goods. These boxes are then moved to a reel tub and loaded onto the tub. Four pieces are loaded simultaneously from four different boxes (20 strand tub). When loaded, souring is the next step followed by an alkaline soaping, hot washing, and blueing. These steps were covered in the last of this series and to prevent repetition will not be covered here.

General Information

As is the case in any method of bleaching, the boil out is the important thing. In fact, a good boil out is absolutely essential to a good white. In this case a good boil out goes back to the wetting out of the goods. This takes place, as was mentioned, in the brown or acid sour. This method of wetting is far superior to loading the goods dry and then wetting out in the kier. Since a single strand of goods is run through the box containing the acid solution, there is little danger of the goods not being thoroughly and uniformly wet out. Wetting out an entire kier of cloth after it is loaded requires much more time and care with much greater danger of unsatisfactory results. With the goods thoroughly wet out there is little danger of the boil failing, and even if it should fail, the goods will most likely be in a uniform condition rather than spotted.

The hand or feel of any piece of textile fabric is very important from a sales point of view, and this, after all, is the important thing. Of the three methods used for bleaching knit goods, on the tub, kier-chlorine, and peroxide, the method just described gives the more harsh feeling piece of goods. Peroxide bleached goods have the better feel and the tub bleached goods are midway between the other two types. The reason the kier-chlorine bleached goods are more harsh is the strong caustic boil to which the goods are subjected. This factor will also limit the types of goods or styles that may be bleached by this method. Those styles requiring a good hand must be bleached by one of the other two methods.

Remember The Sick

"Hurry up and get well," was the heading on a sheet of paper signed by all the men in the department of a man who was sick in the hospital. These good wishes were personally signed by every one of his fellow-workers in his department, and at the bottom was the line, "Your friends in the tool room gang."

The Department foreman had started this sheet around the department, and when he went to call on his man in the hospital he took it along and presented it to the sick man.

No question but what that foreman was building sincere good will, not only on the part of the sick man, but on the part of every man who signed the greeting.

A little touch of human kindness and consideration goes a long way.—"*Management Information*", *Elliott Service Co., Inc.*

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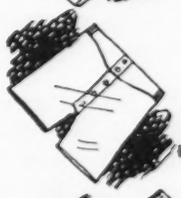

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KNITTING KINKS

Running Nylon

EDITOR COTTON:

Does nylon require different machine adjustments from silk? What are the major changes?—CONTRIBUTOR No. 7112.

We are running nylon full-fashioned hose and we have found that there are no major changes to be made on the machines. It is possible to change from silk to nylon by making an adjustment of the needles, adding or taking press from the needles.

By the foregoing I don't mean to imply that nylon is easy to run, for it is not. One week it seems to run quite well and the next week it will go all wrong. Weather conditions have much to do with how well nylon runs—the less humidity in the room the better it will run.

Of course nylon processing is still in its infancy, but we have found that the main trouble in the handling of the nylon hosiery is pulled threads. In order to eliminate as much of this as possible we have covered everything in the mill with fabric that the stocking might come in contact with, and we also have our knitters work with gloves on. It seems that there are more pulled threads in the work from the footer.

We like to know just where the threads in our nylon stockings are getting pulled, so we have the work examined after each process. The goods from the legger are flat examined and when they come from the footer they are examined again. This examination is carried out through the loopers and the other processes so that we can determine just where the work is being pulled.

Another thing we have learned is that the looper clippings get hard after they have stood awhile and if they come in contact with the leg a pulled thread will result. To eliminate this we hang the dozens of stockings straight down in racks and tie them with cloth so the clippings will not have a chance to come in contact with the rest of the stocking. This has saved us considerable pulled threads.

CONTRIBUTOR No. 7136

Modernizing Old Machines

EDITOR COTTON:

Do you believe it pays to modernize old machines such as lengthening and speeding up full-fashioned equipment?—CONTRIBUTOR No. 7115.

In my opinion it does pay to modernize old machines, and I think it is essential to keep the machinery properly maintained at all times. I will not comment on adding sections to the machine.

Only recently we reconditioned the first 10 machines that we bought and they are making fabric that compares favorably with the new machines.

We had an outside crew come in and regrind and re-cut the sinker head, reneedle and put in new sinkers and dividers, knocking-over bits, narrowing points, and install a lighter jack to conform to the latter type of machines; this reduces the breakage of the sinkers.

Wherever bearings or bushings needed to come out, we replaced them. I think the whole job was well worthwhile.

In our plant we have no system of overhauling at regular periodic times, but we keep our machines in good running order and if one gets out of fix, we repair it immediately, keeping the machine in the best shape that we know how at all times. If a certain machine has a bushing or bearing going bad on us, we take the machine down on the week-end and fix it.

One thing can get wrong with a machine and cause some other trouble, so we fix the machine immediately. "A stitch in time saves nine."

CONTRIBUTOR No. 7120

EDITOR COTTON:

I do not believe it would pay to try to modernize old full-fashioned machines because the old equipment is coarse gauge and to change the gauge would cost as much as the new machine. It would be like trying to modernize a Model T. The old machines are 18 or 20 sectioned and the new ones are 30 sectioned. The changing from one gauge to another is also impractical.

CONTRIBUTOR No. 7131

Streaks Caused by Worn Jacks

EDITOR COTTON:

What is the best method of correcting uneven fabric, tight and loose streaks, in full-fashioned hosiery, caused by unevenly worn jacks in the jack head?—CONTRIBUTOR No. 7121.

The sinker heads become worn and have play in them; this is the main cause of tight and loose streaks. You could put in new sinkers and it would do no good. The jack heads could be taken out and reground, but I would think that to eliminate the streaks for some time it would be necessary to recondition the entire machine.

The reconditioning could be done by getting a crew to regrind and re-cut the sinker head, reneedle and put in new sinkers and dividers, knocking-over bits, narrowing points, etc. Also, any bearings that show wear should be replaced.

CONTRIBUTOR No. 7127

They mean a lot to me

"As a stylist I am naturally interested in hosiery—style, fit, durability, color and quality of knitting. It is part of my business to know about such things. In buying stockings for myself, I pay particular attention to the knitting—because it is the basis of good style, fit and wearing qualities. I am sure that the serviceability of stockings depends to a great extent upon how smoothly and uniformly they are knitted."

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CHECKING for correct needle alignment, height of beard and centering in the groove is done by gauge for absolute uniformity. Needles are also spaced by gauge—not by eye. Final checking repeats every check made by straighteners.

TORRINGTON

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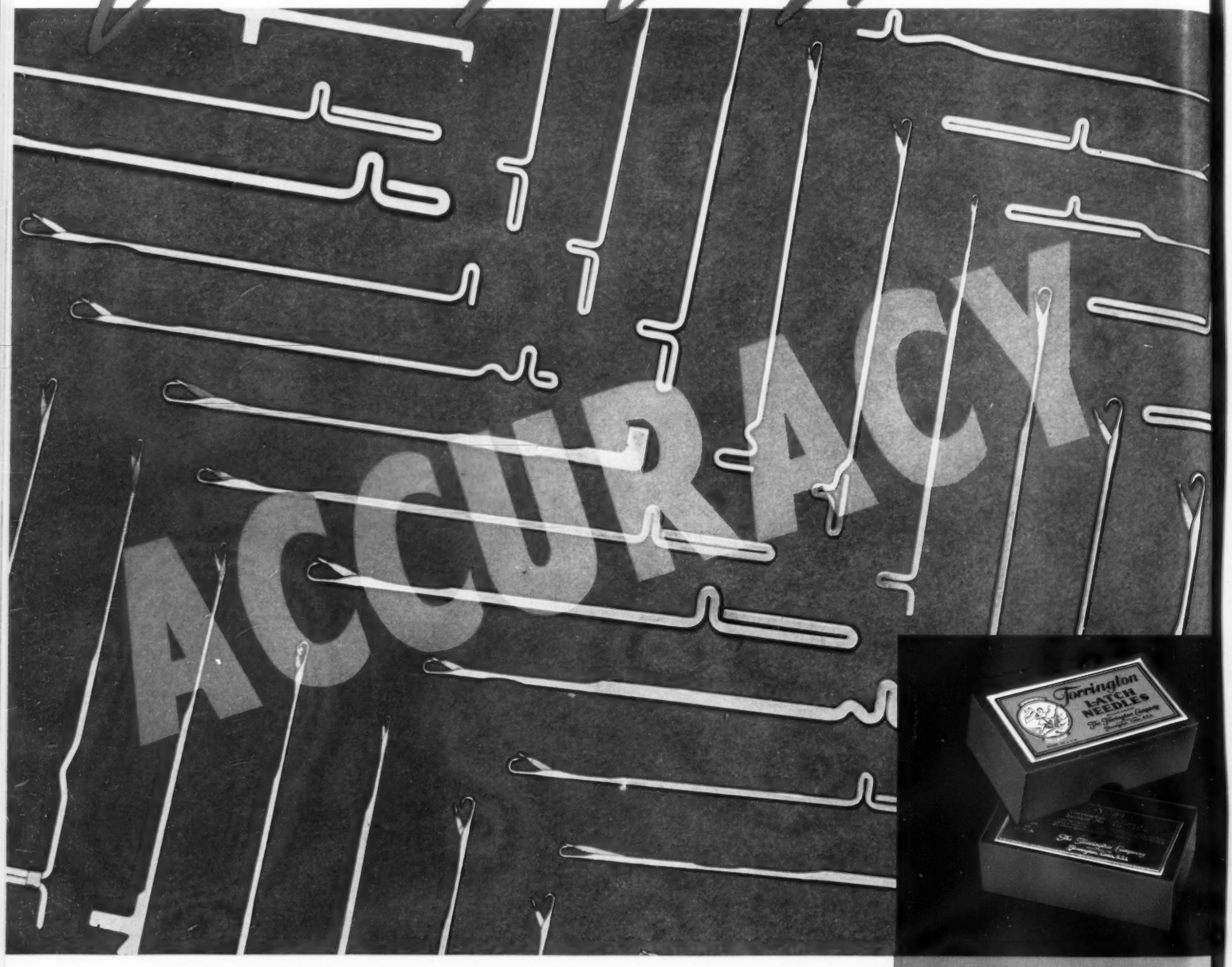

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Service from Machines on 2 and 3-Shifts

EDITOR COTTON:

Do hosiery machines give better service when running three shifts than when running two shifts?—CONTRIBUTOR NO. 7123.

In my opinion the full-fashioned machine will give better service when running two shifts than when running three shifts. Having three knitters on one machine is just too many. I really think there would be better work if the mill only ran one shift and had one man to work on one machine. This one man could be held responsible for his machine and would take more pride and care in how he kept it running; the needles, etc., would be kept in better condition, and hence the machine would produce a better fabric.

On the two shift operation there is some buck passing between the first and second shifts and if there were three shifts there would be just that much more.

This does not even take into consideration the effect of overproduction on the entire industry.

I have heard it said that the machines do not start up very well in the mornings after they have been stopped for several hours, and this may have been the basis of the question. If so, I might say for this man's benefit that we do not have trouble in starting up in the morning. Our men lubricate the sinkers, needles, narrowing points and picot points at night, and we never have trouble starting up even on Monday mornings.

CONTRIBUTOR NO. 7129

Length and Match Control

EDITOR COTTON:

What system do you consider best for length and match control on full-fashioned machines?—CONTRIBUTOR NO. 7114.

The best system that I know is to count the number of courses per inch while the fabric is on the machine and then adjust the machine accordingly if it is not producing the desired fabric. We can move the draw-off roller to slacken all heads and by looking along the entire line of heads can tell at a glance which ones are tight or loose, and then make the necessary adjustment.

We have found that by using the one-inch method of counting that we can keep the lengths in line very well. Some mills measure two inches and others one inch, and some men in the same mill measure one inch and others two, but the fabric would be more consistent if the mills used the one-inch method.

CONTRIBUTOR NO. 7137

EDITOR COTTON:

The length control depends on what type of silk you are running, that is, whether it is crepe, high twist or low twist. To regulate the match you must have even temperature and even humidity. For crepe twist you need high humidity.

Another thing about humidity: Suppose this morning the humidity is quite high and it penetrates the knitting room; if there is no air conditioning you will get from one-half to one inch longer stockings than you will get in dry weather. The high humidity makes the stockings run longer.

As far as matching between the leg and the foot is concerned, this is a matter of using the same silk in the leg and the foot. If you are using a 10-bale lot in the leg, you should use the same silk from this 10-bale lot in the foot also. If different silk is used in the leg and foot there is likely to be trouble.

If we start in on a 10-bale lot, we run it on through, identifying it by tinting in our own throwing plant, but if the mills wish their throwster to tint the silk for them he will do so.

Another way to insure matching between the leg and the foot is to blend the silk. We use both systems. It simply depends on how many bales will be needed in making one number.

Something else that is important in preventing mismatching is to check the courses in the legger with those in the footer. Blending will not help at this point because this is a machine adjustment.

CONTRIBUTOR NO. 7130

No "Specialist Fixers"

EDITOR COTTON:

Having read "The Specialist Machine Fixer" on page 134 of your May issue, and inasmuch as the contributor expressed his desire for comment, I am offering a few words. The article was very interesting, but I can't quite agree with the writer.

To begin with, there has only been one great "Specialist" of our time, the one so widely characterized by a Mr. Chic Sale, and the effect of modern plumbing on his specialty need not be mentioned.

I agree with the writer that there is a necessity for specialists in the hosiery mill, but each and every fixer should be a specialist on his own set of machines. In my hosiery mill experience, and I am a fixer, I have seen the suggested "line men" idea tried and the result was an increase of bad work with much difficulty and doubt as to where the responsibility could be placed. I'm wondering if "CONTRIBUTOR NO. 7074" is a fixer. If so, how does he like pulling a machine into the line that another man has overhauled. Every good fixer I know hates to take over a machine from another man, for no two fixers make their adjustments alike and in no time the machines will be operating like a Chinese puzzle.

Experience has proved that the best results are obtained when the fixer on a set of machines knows each machine, inside and out, for its individual weak points and bad habits. How can a fixer learn his machines to the best advantage if he is not permitted to get familiar with them? Of course, if a fixer is satisfied just to go along through the years and

keep up a line of machines there is no alternative but to have a "specialist" who can help him over the rough spots, but the average young fixer today wants to progress and get ahead of the next fellow. He wants to learn all the new stuff and takes pride in having his set of machines running better and more regularly than the others. A mechanically inclined fixer of this sort is an asset to any textile mill and should be given every advantage and encouragement.

True, there is a shortage of good fixers today, but it is the fault of the mill owners and managers. Through the process of taking a likable knitter and giving him a few weeks of instruction and coaching on needle insertion and alignment, there has become an over supply of "everyday" fixers. These fellows were thrilled at being called a fixer and the very few extra dollars their pay envelopes contained. The mill owners relished the idea of lower fixing costs and practiced it so extensively that many good fixers saw the storm cloud gathering and took up other kinds of work. It is very unfair and discouraging for a progressive fixer to break in a green one who later will take his job at less money.

As the writer says, in small mills it is necessary for the fixer to know it all so why not in the larger ones. In the spirit of progress, each and every man should learn all he can so that he doesn't have to stick on one job all his life, but be able to go out and take more responsible positions. One big trouble with the hosiery industry today is that too many of our overseers and managers know nothing about the mechanical end of it or what a fixer is up against, and consequently, they don't cooperate with the help to the company's best advantage. A large majority of our mills have harbored mediocre help so long that their machines are practically a mess of junk and they are forced to find a good man now and then to come in and straighten things out. A lot of them complain to the makers of the machines and when a man is sent out to answer the call the first trouble he finds is sloppy fixing.

Not so many years ago it was customary in the hosiery industry to have the best men on the night shifts for they could be depended on to do their work without someone to watch over them all the time. It was also quite common to pay these night workers better than the day force so that a night job became a thing to cherish and work for. I know of one night crew that got along so well they were "called on the carpet". Sounds queer, doesn't it? A few families living near the mill complained about the noise the night crew made. It developed that all they did was sing and the owner was so glad to learn he had employees so contented they could sing at their work that he didn't ask them to stop but asked them to make it a trifle softer.

A grave mistake was made by the mills that changed the system to having a good man on in the day time only and learners on the late shifts. Generally, the day fixer literally has to work his head off to get things in shape for the next shift, and even then he is so hurried he can't do the necessary work thoroughly, and the very next morning the picture is the same thing over again. In several cases figures have proved that fixing costs actually increased by employing such methods. With the advent of finer gauge machines, fancy patterns, and finer yarns, the percentage of seconds and waste increased enormously. In order to balance the production sheet many mills employed cheaper fixers while the smart ones got better fixers to keep their machines up and the bad work down.

In my opinion there are two distinct classes of hosiery machine fixers. The Fixer—a man who just piddles around until he stumbles onto the trouble. He can temporarily remedy a given fault after he has been taught how. The Mechanic—an alert and mechanical minded man. He can trace the trouble to its source and permanently put it to rights. If more importance were attached to the latter fewer fixing problems would arise.

"CONTRIBUTOR No. 7074" states that "it takes many months and even years, to train a fixer". Yes, it does, but I don't think that is carrying it far enough. Among my friends and acquaintances in the hosiery business the general belief is that a self-made mechanic is worth much more to a concern than a "trained" fixer. The idea that a man is *never* completely trained is universal. In a hosiery mill, as in any other line of business, the longer a person stays with it the more he learns. Somewhere, sometime, something will happen to a particular machine and fixer that has never happened before to anyone and may never happen again. The "specialist" wouldn't be of any help to the fixer nor the fixer to him. So, for the benefit of progress, efficiency, and congenial working conditions, we must all work together, and I can see no place in the hosiery mill for a specialist.

CONTRIBUTOR No. 7107

Fine Goods on Coarse Gauge Machine

THE FOLLOWING question was submitted to the editors of COTTON: "We have some 176-needle 36-gauge 3¾-inch Banner machines equipped with 36-gauge needles, which we use to make heavy or coarse gauge anklets. Is it practical to make fine gauge goods on these machines by changing the needles to 36-gauge needles with 48-gauge hooks? Should any other changes be made on the machines?—'Contributor No. 7050'."

The following answers from practical mill men are in answer to the question:

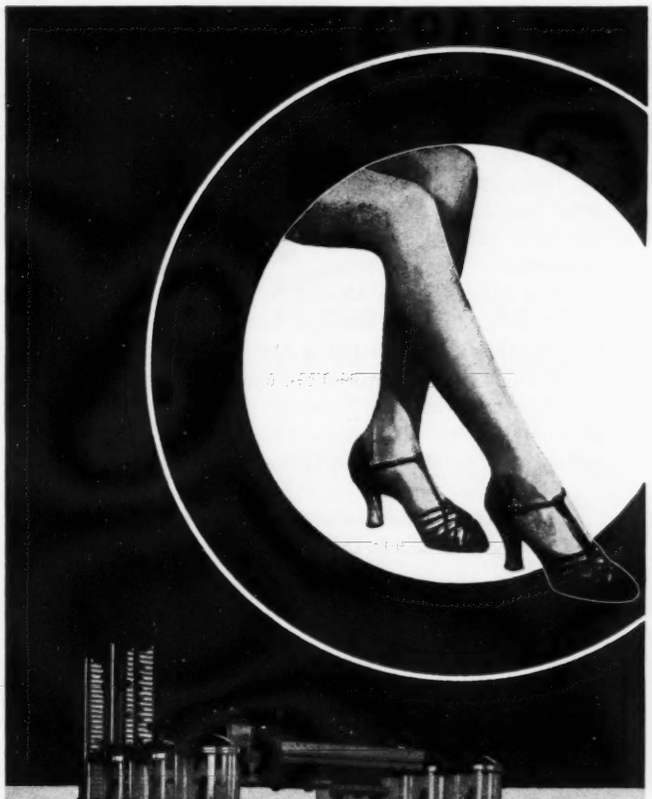
EDITOR COTTON:

36-gauge needles with 48-gauge hooks would make a somewhat finer fabric but to make a fine fabric it would be necessary to change cylinders to 200-or 220-needle. There would be very little difference between 36-gauge and 48-gauge hooks in a 176-needle machine. Finer gauge cylinders can be purchased and I would recommend changing the cylinders.

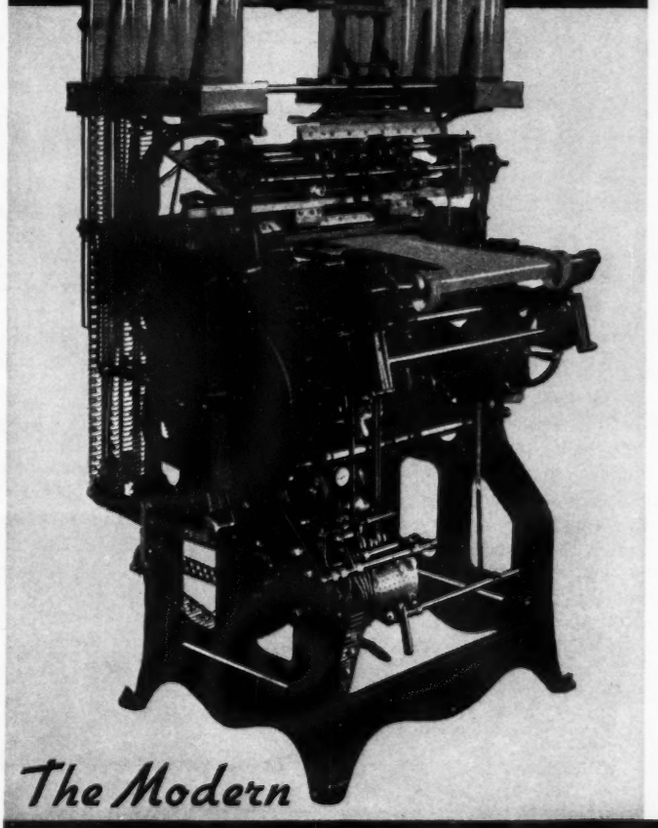
CONTRIBUTOR No. 7108

EDITOR COTTON:

With reference to making fine gauge hosiery on



ONE Machine, ONE Operation for Stocking PERFECTION



The Modern

Even the best leggers and footers are sometimes like relatives who don't speak. Only YOU know how much bad matching costs in your plant; how many rejects and seconds are thus caused. The WILDMAN Single-head, Single-unit machine knits the entire stocking in ONE operation, perfect from top to toe. It embodies lots of other mechanical and product quality advantages. May we tell you about this modern machine?

WILDMAN MANUFACTURING CO.
Norristown, Pa.

WILDMAN
THE WORLD'S STANDARD

WILDMAN SINGLE-HEAD, SINGLE UNIT FULL-FASHIONED HOSIERY MACHINE

a 36-gauge machine by using 36-gauge needles with 48-gauge hooks, it is my opinion that changing the needle hook will not change the gauge of the fabric very much. The number of needles in the cylinder and the size of the yarn used determine the gauge of the fabric.

It is possible to make a fabric on the machine in question that will look like 48-gauge fabric. If this is done by using 48-gauge hoop and smaller yarn, about 250 denier, the hosiery made would be size 8 or 9 and would have the appearance of being 48-gauge. Even this set-up will not make a good 48-gauge fabric, but it will make a good imitation.

CONTRIBUTOR NO. 7109

Even Heel and Toe Stitch on Banner

EDITOR COTTON:

This is in answer to "CONTRIBUTOR NO. 7055" who, on page 166 of the April 1940 issue of COTTON, asked "when running Banner machines, what is the best way to even the heel and toe stitch?"

There are those that consider turning the machine forward and then turning it backward to determine which way the loose or tight stitches are made, then adjust accordingly. But I think a better method is first to gauge the stitch cams with a gauge provided by the manufacturer for this purpose, then check the raising cams to see that they are close and at the correct angle.

It is important that the needles start raising as soon as they have reached their lowest point; also, the side sinker cams and the bumpers should be checked.

The sinker cams should be set so that the throats of the sinkers come into the back of the needle. Bumpers should be set so there are three sinkers between the knitting point and where the sinkers start in. The stitch should be even, but if it isn't, raise the latch ring and there determine which is the loose stitch—adjusting the stitch accordingly.

Sometimes the stitch will be uneven near the gore and be okeh in the center. This is sometimes caused by having too much tension on the yarn. If it runs free until the take-up comes down, then has to pull through the tight tension, it will cause a tighter stitch. In this case, loosen the tension until it is no tighter than the take-up spring. If the foregoing instructions are followed closely, the machine will produce a perfectly even stitch.

CONTRIBUTOR NO. 7100

An Eye on the Knitting Mills

The North Carolina Division of Commerce and Industry, Raleigh, has announced that five new hosiery mills were established in the state during the first four months of the year and that additions have been made to five existing plants. The new mills are: Black Hosiery Mills Co., Midland; Vance Hosiery Mills, Inc., Henderson; Surrat Bros., Lexington; McCauley Hosiery Mills, Inc., Statesville; Cooksville Hosiery Mills, Vale. Additions were erected by Standard Hosiery Mills, Alamance; Triangle Hosiery Mill, High Point; Davis Full-Fashioned Hosiery Mills, Greenville; Renfro Hosiery Mill Co., Mt. Airy; and Harriss & Covington Hosiery Mills, Inc., High Point.

Morristown (Tenn.) Knitting Mills, Inc., have established branch plants at Danbridge and White Pine, Tenn. The Danbridge plant houses 60 Banner knitting machines and the White Pine plant has approximately 80 machines and auxiliary equipment. Dyeing and finishing is done at the plant in Morristown.

Luray (Va.) Textile Corporation, with a maximum capital of $200,000, has been granted a charter to establish a throwing corporation. Ernest Galesel, Clifton, N. J., is president. Negotiations have been under way for some time and bids have been submitted for the building. The first unit is expected to employ 250 workers.

Owen-Osborne, Inc., Gainesville, Ga., have under construction, adjacent to the present plant, a building which is said will double the capacity of the plant. Contract for the addition is being handled by McCoy Construction Company, Greenville, S. C.

Walton Hosiery Mill, DeFuniak, Springs, Fla., it is reported, have been purchased by W. F. Green, local attorney. There are some $10,000 in claims against the mill but plans are under way, which is completed, will permit the mill to be operated again.

Walton Knitting Mill, Hickory, N. C., has begun construction of a 36 x 40 foot addition to its plant. The new addition will provide space for installation of additional machines, it is understood.

The final liquidation of the Okey Hosiery Company, Charlotte, N. C., has been effected. Principal assets consisted of knitting machines and other equipment; these were turned over to the mortgage holders.

Owner of the Clark Hosiery Mills, Marietta, Ga., has announced that he will open a hosiery mill at Burlington, N. C., in the former location of the Full-Knit Hosiery Mill.

Julius Kayser & Company has presented knee-length socks fashioned of Durene yarn for fall and winter campus and sportswear in brown, camel, chamois, navy, red green, ice blue and white.

W. F. Hedges of Chattanooga has begun operation of the Ringgold (Ga.) Hosiery Mills in the old Whitsett house; children's hosiery are produced.

It is reported that Thompson Hosiery Mill, Graham, N. C., will be moved to Burlington, N. C., in the Aurora Cotton Mill building.

Lauderdale Hosiery Mills, Fort Lauderdale, Fla., have closed temporarily and will probably be moved to another place in the same city.

At Henderson, N. C., the Vance Hosiery Mills have changed names and are now known as the Continental Hosiery Mills.

Wyatt Knitting Company, Sanford, N. C., is reported to be installing additional full-fashioned hosiery machines and auxiliary equipment.

Sapphire Hosiery Corporation of Philadelphia has filed papers of incorporation, showing capitalization of $152.000.

Ashilin Hosiery Corporation, New York City, has filed papers of incorporation with 100 shares of no par stock.

They All Benefit—

from the Features of a Mechanical Wonder

THE BOARDERS benefit through the comfortable working conditions provided by the Proctor Automatic Boarding Machines as well as the e-a-s-e with which this equipment enables them to board *more* dozen pairs of hosiery in an 8-hour day and thereby increase their earnings.

THE MANUFACTURER and FINISHER benefit through savings resulting from the maintenance of high quality results at high production in little floor space. Production is limited only by the mechanical speed of 32 dozen pairs per hour on the 2-operator machine for women's hosiery and 52 dozen pairs per hour on the 2-operator machine for men's half hose.

THE SALESGIRL benefits by the unvarying high quality of stockings that have received ideal finishing on Proctor Automatic Machines. Such hosiery's appearance has sales appeal which means more sales. And she may make her sales with confidence in her recommendations . . . with the fore-knowledge that satisfaction to the customer is assured.

THE CONSUMERS benefit by being able to purchase with confidence socks and stockings of manufacturers whose names have come to stand for assured quality . . . the best in appearance and comfort.

Let us send you an interesting and educational booklet—The only complete description of modern scientific boarding.

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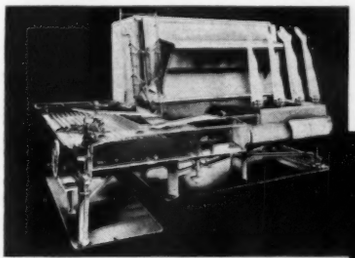
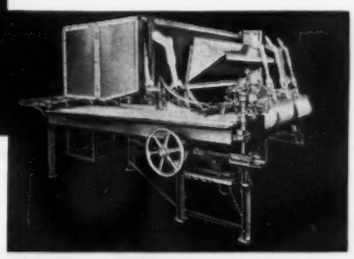


Automatic Machine for Women's Hosiery



Automatic Machine for Men's Half Hose

PROCTOR & SCHWARTZ *Automatic* BOARDING MACHINES

Inserting Needles in Banner Machine

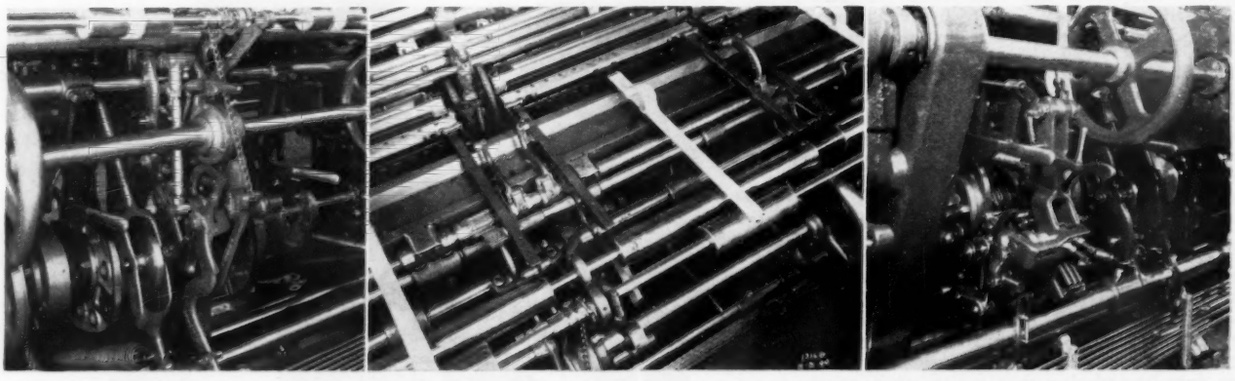
EDITOR COTTON:

On page 166 of the April issue of COTTON, your "CONTRIBUTOR NO. 7053" has asked the following question: "When changing cylinders on Banner machines, and the ones that are to be used have no needles, what is the best method of determining where the long and short butt needles should be placed? Please explain in detail."

In answer, I would suggest putting the cylinder in the machine and turning the machine on the heel, starting with the long needles and seeing that they swing past the rise cam. Then add more long needles around the cylinder until the proper number of long needles are inserted in the machine.

Next, add the short needles and then run the machine off of the heel onto the toe and see if the rise cam raises the long needles in time for them to pass the center cam. If they don't then you might have to change a needle or two as all drum pawls don't kick the same. Another thing, when the picks have taken all the needles down on the toe and the machine starts off, the picks should drop before the last short needle that is up gets around to it. If this does not occur the pick will take it down and go back up and cause it to break long needles as they come off of the toe; also, the drum pawl not kicking up far enough will cause this.

CONTRIBUTOR NO. 7095



Some of the important motions of the new Reading machine are shown in the three above photos. Left, the operating unit of the welt bar hook-up attachment. Center, the welt bar hook-up attachment, showing welt bars inserted, ready for completing the hook-up operation. Right, the operating unit of the automatic brush shifting device controlling the B.T.A. motor.

New Reading Full-Fashioned Machine

Textile Machine Works, Reading, Pa., has designed and made available new 30-section high-speed leggers and footers which are said to combine high production of first quality fabric with a maximum of mechanical efficiency. Mill men that have seen this new machine report favorably on it. The machine is equipped with many exclusive features, among which are:

Hook-up attachment, developed to provide automatic welt bar-hook-up when starting the knitting process. It consists essentially of specially designed draw-off bridges and central operating mechanism for controlling simultaneous insertion of the welt bars and the hook-up operation. The device results in increased production.

Automatic brush shifting speed control to eliminate electrical equipment formerly required for speed reducing; at the same time it furnishes from 8 to 12 speed changes that are available during the knitting of a leg or foot blank. The machine speed for narrowing or lace-forming can be set at any desired point over the speed range quickly and accurately. Any pre-determined machine speeds can be set-up by the fixer and changed at will to provide for style requirements.

Automatic knock-over bit roller shifting, which through direct chain motion action the knock-over bit rollers are automatically shifted to the desired cam at any point during the knitting process . . . furnishes either 8 or 12 changes during course of knitting.

14-row chain motion from which various automatic features are controlled. A feature of this unit is positive rocker shifting arrangement by direct cam action. Has built-in course counter and footer counter is designed so that a change in foot size involving the elimination or addition of as many as 210 courses can be made instantly by setting a plunger.

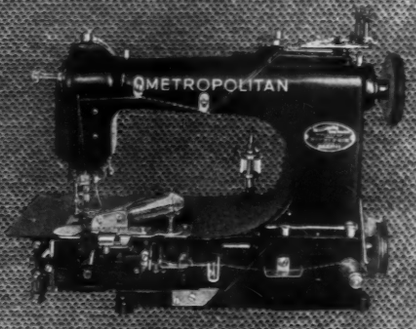
B.T.A. variable speed motor drive with dynamic braking, allowing the following: instant changes in knitting speed of from 26 to 80 courses per minute through use of automatic brush shifting device; quick stops without maintenance troubles; high power factor (averages about 90 per cent); possible to operate the machine at high speed 67 per cent of the time; elimination of direct contact switches through use of mercury tube switch.

Other features of the new machine are: automatic regulating motion combines with automatic loose course motion; automatic draw-off motion; "Conditionaire"; double spindle reinforced selvage attachment, including means for making 4-needle steps automatically; improved cam shaft rocker; 30-needle movement for center lace attachment; positive, cam operated carrier rod shock absorber; improved coulier motion; alternating 3-carrier attachment; balancing cams; camshaft air brake; coulier motion safety switch; lockstitch attachment; oscillating draw-off reel shaft; safety release for narrowing lift shaft; single needle bars; wide sinker heads; water cooled friction shaft; improved splicing attachment; adjustable dogs on carrier rods; adjustable stops on reinforced selvage nuts; adjustable tension feltless moistening troughs with water leveling device; corrosion-proof protecting aprons with drain gutters for disposing of excess moistening fluid; and ballbearings for handwheel shaft.

ATTACHING SPLIT TUBING *in the* MODERN MANNER

The attaching of split tubing on knitted undergarments of cotton, wool, rayon, or silk, is effected economically and at HIGH SPEED with the New Improved Metropolitan, Style 950-CDD2, Machine.

Its many exclusive and outstanding features provide the necessary facilities which make possible new standards of quality and production.



STYLE 950-CDD2

SEND FOR SAMPLES AND DESCRIPTIVE BULLETIN NO. 811

METROPOLITAN SEWING MACHINE DIVISION OF

WILLCOX & GIBBS SEWING MACHINE CO.

656-658 BROADWAY, NEW YORK, N. Y.

TRENDS AND HIGHLIGHTS OF THE KNIT GOODS MARKETS

Unsatisfactory Conditions in Knit Goods—Normal Buying Being Delayed By War and Other Uncertainties—Hosiery Production Smaller Than Same Period in 1939—Underwear Mills Not Booking New Business In Volume—Prices Unchanged—Government Rearmament Means Large Knit Goods Needs.

August 16, 1940

ALTHOUGH predictions are general that the vast sums the government is spending and will spend on rearmament will mean much better consumer buying of such lines as hosiery and underwear, there has been no preparation for this by the wholesale markets. Buying for fall and next spring has been delayed by a majority of buyers who give as the main reason the fear of what effect a victory over England might mean to business in this country or what effect an early peace might have on the inventory values of many textiles. An important factor in the market and one that is going to become much more important is the government buying of all types of knit goods, including large amounts of hosiery and underwear, cotton and wool as well as mercerized socks. Prices of commodities such as silk, wool and cotton show no great changes and this also applies to knit goods.

Full-Fashioned

Demand for full-fashioned women's hosiery has been quiet again this month with prices named by knitters and jobbers showing no change. The exception to dullness is nylon merchandise which continues to be outstanding with retailers generally selling the goods quickly and manufacturers being unable to accumulate any stocks. One result of the nylon promotion is that some full-fashioned manufacturers have announced that they will confine their silk numbers to less than $1.00 while over that price will be nylons; such an announcement was made recently by Cannon Mills. Berkshire Knitting Mills announced they would withdraw nylon hosiery in 45-gauge retailing at $1.15 and will confine their nylons to $1.35 numbers.

Full-fashioned shipments for the first half of this year were almost 4 per cent smaller than during the same six months last year and the curtailment until recently has been more severe in the second quarter than in the first three months. Full-fashioned shipments in June were the lowest in any June for several years, reflecting the unsatisfactory condition of the market. Yet consumer demand is going to be better this Fall and Winter with more people back at work and silk full-fashioned hosiery is cheap, meaning that it will not experience consumer resistance. In view of this manufacturers will see better business once stocks in mills' hands become smaller. These were large during the first half of the year but now show signs of declining.

The stability in raw silk is another factor that is going to develop more confidence as goods buyers see that no lower hosiery prices can come from that end. While the last months have been discouraging the outlook for full-fashioned is definitely better and mills should have a more profitable second half although no boom is in sight under any conditions.

Half-Hose

Men's half-hose mills have been averaging in volume about 8 to 10 per cent behind last year and their experience for the first half of the year is about in that proportion. At present there is a good retail interest in the short summer socks with elastic tops but knitters are now working on the wool goods for the coming winter. It was felt for a time that the domestic situation in wool lines would be helped by the war situation especially as it affects the British goods but it has not worked out this way. Imports of such goods have held up better than expected and American mills are slow to get to work on the winter lines, not wanting to accumulate large stocks of goods in case the war were to end suddenly and wool might then possibly go down in price. The smaller shipments of half-hose this year as compared with the first half of last year is more noticeable in the regular length socks than in the slacks or short types. In the latter the reduction in the first half of this year was only 2.5 per cent compared with about 10 per cent drop in total half-hose shipments. This shows that the season has held up proportionately better in the short goods which are still moving in an active manner at retail so that no accumulation of stocks of such goods is being witnessed.

Seamless

There have been reports that early volume buying has started for the 1941 spring season in anklets but confirmation of these has not been possible although some business has been placed for that delivery. The buying is in staple goods as some mills at present have not completed their spring offerings and have made only tentative showings with partial samples. Activity in these lines will come in September with specifications late in the year Terry cloth constructions had a very active spring here but with hot weather they became quiet and there was some talk in the various divisions of the market that they had been only a flash in the pan and would not come to life for fall and winter. This is not going to be the case; terry cloth in anklets and half-hose will be good fall numbers, this being already indicated by jobber experience.

Underwear

Underwear mills were busy most of the first months of the year getting out the large volume of business that was placed at and shortly after the outbreak of the war last fall. They were not in receipt of a large volume of new business since so that even though most have a fair to good production record for the first six months at present they are not busy. They have shipped out much faster than they have booked new orders. There are a few now that sell large retail outlets such as the chains that are busy but most are now quiet and working only part time until demand for the fall line gets active. The government has been an active buyer of cotton and wool underwear in recent weeks and promises to step up its commitments further in the near future as the larger army, the national guard and the Civilian Conservation Corps needs are met. There is no sign of

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The modern finish is RESIPON A M; it gives all types of spun rayon fabrics a smooth, full hand similar to that of fine pure silks.

Shrinkage is greatly reduced in processing, leaving a very low residual shrinkage in spun rayons which are to be sanforized.

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Applied on a quetch; economical in application; offering low finishing costs, RESIPON A M is the latest word in finishes.

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hurry on the part of manufacturers to open their spring lines, indicating that buyers are holding off on commitments that far into the future.

Three Shift Operations by Hosiery Mills Surveyed

The three shift operations of the hosiery industry as of the last quarter of last year are being surveyed by the National Association of Hosiery Manufacturers in conjunction with a survey of the industry's knitting machines. The association has repeatedly pointed out that an industry which is already over-capacitated cannot stand the luxury of three shift operations. Whatever advantage may accrue to those few plants which operate on three shifts will gradually disappear as other plants move in the same direction for their self protection. In the last analysis, the position of the industry as a seller will become weaker as the balance between supply and demand is further dislocated, according to the association. Officers of this organization know that many of the managements which have indulged in three shift operations will be glad to see such operations discontinued.

The association made no estimate as to the amount of the equipment which has been operating twenty-four hours a day until the survey has been completed. In this connection it made the comment that when the facts are at hand consideration will be given as to ways and means by which to deal further with this great problem. The American Federation of Hosiery Workers following action taken at its recent annual convention in Milwaukee is now conducting a referendum of its members on a resolution regarding three-shift operation of hosiery mills. This resolution empowers and authorizes the union's national executive board to adopt any and all legitimate ways and means which it may deem necessary to protect and preserve the interests of the membership with reference to the three shift method of operation of hosiery machines. The union has declared that it continues to oppose the third shift and it also is seeking the best manner of attacking this problem.

Underwear Institute Plans Defense Capacity Study

An industry-wide survey to determine the ability of underwear manufacturers to produce underwear or allied products required by the United States for national defense purposes is being made by the Underwear Institute. All industries are now being obliged to consider their ability to furnish materials necessary for national defense. In this connection Federal buying agencies have the desire to do as much of their buying as possible during normally slack seasons and the Institute has collaborated to provide information to that end. Manufacturers have been well pleased, realizing this will tend to eliminate seasonal flat spots and mean the least possible interference with regular commercial business during busy seasons. A further aspect of industry capacity being investigated by the institute is the question of installation of productive equipment, knitting machines, sewing machines, etc. All of these studies mean that manufacturers have been receiving many inquiries but the Institute finds that their attitude of cooperation has been unstinted and highly commendable.

President Roy A. Cheney, of the Institute, has spent considerable time in Washington dealing with members of the Advisory Commission to the Council of National Defense and with government purchasing agents including Edward Stettinius, Donald Nelson, Robert Stevens and the army and navy and other service heads. Both for the benefit of the government and the underwear industry Mr. Cheney has been engaged in procuring revised underwear specifications which will admit ribbed fabrics whereas previously the flat knit was purchased. In time of emergency it becomes desirable to extend the classification to ribbed knit fabrics inasmuch as the capacity of the industry is predominantly in that field. P. H. Hanes of Hanes Knitting Co., and E. L. Olrich of Munsingwear Inc., have also worked on securing the changes. With the recent large number of Government orders including cotton and wool hosiery and underwear, Federal purchases to date this year are now two and a half times as large as last year for the same period. Furthermore, this business is likely to increase materially. Both for patriotic reasons and because of the important volume of business many new mills have expressed interest in participating in the government bidding.

FORECAST

(Opinion submitted by COTTON's market correspondent)

Philadelphia, August 16, 1940

Confidence in the future has been lacking, with most of the blame for this condition of business being placed upon the war situation abroad. Buyers in most lines seem unwilling to operate ahead until the Battle of England reaches a stage where the future can be foretold with more accuracy than at present. This has meant that fall business is late in being placed and there is less talk of spring orders in knit goods than in a more normal year.

In the domestic picture the main factor for the coming months is that vast sums are being spent by the government and as these expenditures work down to the retailers there is going to be a large demand for consumer goods of which textiles are an important part. This means that the latter months of this year will see a large amount of such goods bought but many in the various trades are predicting low priced merchandise will benefit in the main.

Another factor that does and will affect textiles is the large amount of such goods that must be purchased by the army and navy for clothing soldier and sailors. The Philadelphia army quartermaster depot has been buying socks and underwear in large amounts and much more of this has yet to be done in view of the greatly enlarged forces. This means that manufacturers of knit goods may become busy on these orders and at the same time be confronted with delivery demands from the civilian trade so that it is a factor that may play a fairly important part in the textile situation later in the year.

Commodities have been marking time and this has been the rule with yarns over the month so that there have been no important changes in goods. Indications are that this marking of time will continue until the war situation clarifies itself. If the war goes over the winter then hardening but no great rise in prices may be expeced. With consumers being taxed more heavily the outlook is that profit margins will be small and that low priced merchandise will be wanted by a larger percentage of the public.

This means that the outlook points to a good volume of business during the latter months of this year but with nothing at present to indicate any wide price swings. This would only come when bottlenecks developed in a wide variety of textiles and for the present this is not in prospect and it will probably not be until purchasing agents over the country change their hand-to-mouth buying into one of forward coverage. There is nothing to indicate that such a buying policy is to be placed into effect shortly.

Lower Nylon Costs A Future Incentive

The silk full-fashioned hosiery market continues to reflect an overstocked condition and a consequent price weakness. In contrast to this the group now consisting of almost a hundred mills that are working on nylon hosiery are showing interest in getting costs down so that there will be at least one phase of their operations yielding a profit. Manufacturers have commented that it costs less to make nylon than silk goods of comparable gauge which may be accounted for because a mill must buy silk before it is degummed, thereby losing about 25 per cent in this process whereas there is no such excess in a purchase of nylon yarn.

The latter while costing more per pound than silk actually costs less when the net content of the silk purchase is considered. In addition to this the percentage of nylon irregulars is far less than is the case with silk. Less than 5 per cent of the production of 51-gauge nylon must now be classified as irregulars, owing to the greater strength of the yarn, whereas irregulars of 51-gauge silk stockings still run about 15 per cent. These comparisons are not altered substantially by the

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—Boarding Hosiery?
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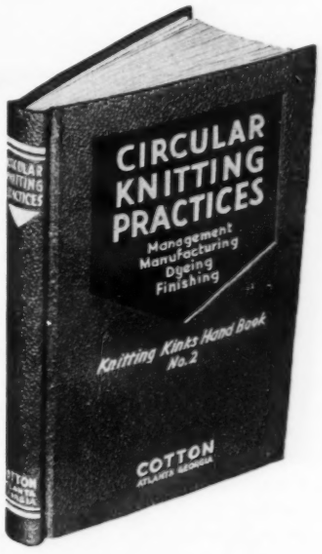
—Keeping Hosiery on Size?
—Lubricating Your Machines?
—Preventing Noise in Loopers?
—Gauging Your Worn Selector Fingers?
—Preventing Drop Stitches on Seamers?
—Selecting Colors for Hosiery Dyeing?
—Reducing Imperfects in Knitting Room?
—Routing Goods from Knitter to Dyehouse?
—Preventing Dirty Gores and Black Insteps?
—Attaching Elastic to Three-Quarter Length Hosiery?
—Setting Pattern Mechanism on Spiral Float Machines?
—Preventing Odds Accumulating in Finishing Department?
—Scouring and Dyeing Hosiery in Rayon Cotton Combinations?



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fact that nylons must undergo a preboarding process that tends to lift the over-all cost of production. As production of the new stockings expands it is hoped that some further economies will be effected, even to the point of obtaining the yarn at lower prices. Mill men maintain that in the long run the price trend of nylon hosiery will be downward even though during the next few months lack of adequate supplies of this new type hosiery will keep this end of the market very firm. Every one in the full-fashioned hosiery business expected nylon stockings to be received enthusiastically by American consumers but few were prepared for the amazing success it has scored in the short time that it has been on the market.

Most anticipated that nylon would be upsetting to the merchandising of silk full-fashioned stockings but none guessed the full extent of the disruption it has caused. At the present time, a little more than two months after nylons were introduced at retail, the full-fashioned hosiery market is almost completely dominated by nylon, even though it represents a very small percentage of the total volume of women's full-fashioned goods. There are many in the trade that feel the new type of goods are being over-emphasized when their relation to the total volume of such stockings is recalled.

Hosiery Shipments Smaller So Far This Year

During the first six months of this year hosiery shipments of all types were approximately 4 per cent smaller than during the corresponding period a year ago. All branches of the industry except anklets and athletic socks registered a decline in this period compared with last year with the greatest percentage decline being reported by manufacturers of children's and infants' hosiery in which shipments the first six months this year were approximately 20 per cent under that period a year ago. Women's full-fashioned mills shipped in the first six months about 4½ per cent less than in the year previous. Nylon hosiery shipments in the first six months totalled 586,737 dozen pairs. In the men's half-hose end of the business shipments were 8 per cent smaller but the situation was mixed due to the relatively much better showing made in men's slack socks as compared with men's regular length goods. Shipments of the latter during the first six months declined 10 per cent whereas men's slack socks over the same period of time registered a drop of only 2½ per cent. The anklet end of the business in this period was outstanding and retailers find that more members of the average family are wearing anklets this summer, accounting for the substantial gain in shipments of this type goods. There are reports that some large buyers have already placed orders for next spring's business in anklets in staple goods but it is not believed that this will become extensive until late in September when another active season is expected to start.

Union Studies Short Section Machine Problem

The American Federation of Hosiery Workers at a meeting of its executive board at Philadelphia discussed the growing obsolescence of the short section full-fashioned machine and at the same time dealt with the ever-present difficulties of organizing the South where to date it has obtained relatively few contracts. The two problems have something in common for much of the old short section equipment that seems so uneconomical to operate has been moved out of Pennsylvania into southern states where a large number of small plants have recently sprung up. Not only the union but manufacturers at large would like to find some solution to the short-section problem. The mill men, however, are fairly well convinced by now that not a great deal can be done about it; that old machines will always find a buyer and that such buyers will try to undersell the market no matter what risks they face. As more machines become antiquated more small plants will come into existence to run them.

There is considerable doubt among manufacturers that the union can do anything more in this respect than has been done thus far in its drive to organize southern workers. The two solutions the mill men have been able to propose are a trade-in arrangement with equipment suppliers and outright scrapping by individual mills. Last year only 112 of more than 1500 semi-obsolete machines were scrapped. Eight hundred were sold and transferred to small plants operating less than ten machines each. Eighty-five new mills installed 600 old machines and 41 old mills installed 190 old machines, according to the Textile Machine Works.

In the Philadelphia district where the union is strongest 200 old machines were moved out and the South took in 150 old machines last year. In commenting on the large degree of absolescence in its own territory the head of the hosiery union at the recent convention said of the 200 mills established since 1937: "A large majority of these mills were started in Pennsylvania, New Jersey, Maryland and Delaware. Their lack of working capital and their obsolete machinery is balancing out their low wage scales and the vast majority of them are in a very precarious position. In the meantime, these submarginal mills have offered merchandise at such a low price level as to add to the distressed market conditions already serious for the industry."

Hosiery Imports Larger During First Six Months

Six months' hosiery imports this year totalled 906,929 dozens comparing with 513,643 dozens for the same period of last year. The sharp gain for the first half of this year was due entirely to the greatly increased imports of cheap cotton numbers from China. Of the total imports during the first six months China accounted for more than half, jumping from 66,694 dozens to 466,907 dozens. From Japan which has heretofore been the largest exporter of cheap hosiery to this country the imports this year were slightly under those of the same period last year. Other important numbers in the hosiery import figures for the first half were 100,314 dozens of wool hosiery of which the United Kingdom supplied 98,835 dozens. This compares with but 47,227 dozens for the first half of last year. The importance of the cheap cotton hosiery numbers in imports from China has been noted by the industry here for several months. Arrivals from that country have expanded each month this year while at the same time the cheap cotton numbers from Japan have been tending downward. The price of the imported Chinese hosiery has held around 50 cents a dozen on the men's numbers with the children's anklets proportionately cheaper. The men's styles are largely solid colored seamless cotton numbers, more nearly comparable to the staple domestic constructions such as 176-needle socks which have to be sold at considerably higher prices than the imported numbers from China.

Government Knit Goods Buying Expands Sharply

With congress passing laws providing for a greatly increased regular army, and for bringing into service the national guard with the future possibly seeing a draft army come into existence, the quartermaster's corps has been placing large orders for knit goods for the armed forces. Thus far there have been large sized contracts placed particularly by the army for hosiery, underwear and other knit goods, with a large number of additional contracts expected in the coming weeks. Most of these government contracts are specifying the earliest

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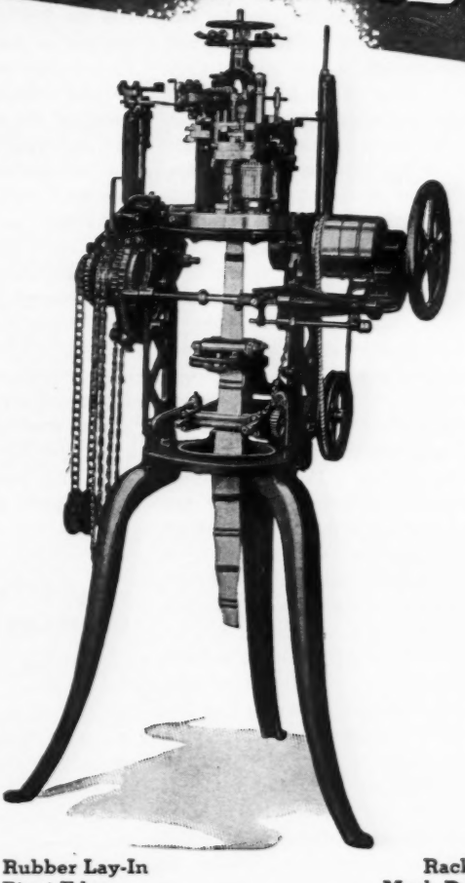

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practical delivery so that civilian buyers should take this into consideration.

Much more important in the market than these direct defense orders for knit goods is the improvement to be expected in civilian buying as a result of the spurt in employment now under way as a result of a large rearmament program in this country. The effects of this have not been felt as yet in the primary markets but it should be a decided influence before many more weeks have passed. Hosiery manufacturers are showing interest in the substantial quantities of both cotton and wool socks recently purchased. Within recent months the army has been buying large quantities of tan mercerized socks which they are using in some cases in preference to the plain combed goods. The latter are usually made from 24s single combed while the mercerized socks are generally made from gassed mercerized yarns including such sizes as 36s, 40s, and 50s two ply as well as 60s single mercerized. In the lightweight wool socks most manufacturers have been bidding on goods made from a merino yarn spun on the cotton system containing not less than 50 per cent of wool.

One ramification of the army business that is benefiting knitters is that of mosquito netting. Formerly all of this type merchandise bought by the army was made on bobbinet machine on which a relatively small number of firms could bid. With the enlarged army requiring so much more yardage of this material the quartermaster depot changed its specifications so that material made on trico knitting machines can be bought. During the last week the army depot in Philadelphia placed contracts of fair size with a half-dozen knitters including some of the largest in the business. In addition to this the same depot is expected to place orders for about twice as much of the same material. Not only do knitters benefit by this but sales combed spinners as well.

Co-operative Hosiery Company Receiver Is Requested

The employes' co-operative plan for the operation of the Hulby Hosiery Corp., Edmund and Hellerman Streets, Philadelphia, resulted in an application by two of the stockholders in the United States District Court for the appointment of a receiver. The petitioners were Joseph H. Settle and Conrad C. Praediger and claimed that "poor management and careless handling of the affairs of the corporation" have forced the company to stop doing business although it was claimed that its assets exceed its liabilities. The company was one of a group in Philadelphia which was organized under the supervision of the Rev. David Colony although the latter had severed his connection with the firm some time ago. The petitioners admit that neither they nor any of the other 31 workers who subscribed to the stock of the co-operative corporation possess sufficient capacity or executive ability to conduct properly the business and the affairs of the company." They appealed to the court to name someone equipped with experience and ability to run the business for the group. Assets were given as $16,740 and liabilities as $16,300. Rev. Colony was described in the petition for the receivership as the one who was in full charge of and managed the business and affairs of the company but the petition did not specifically aver that he was the one responsible for the "poor management and improper and careless handling" of the affairs of the company. Judge Guy K. Bard in the Philadelphia District Court on August 9 appointed J. Griffith Boardman, former State Secretary of Revenue, and Carl B. Goldacker of the Barsol Hosiery Finishers, receivers for the Holby Hosiery Corp. Judge Bard fixed bond in the sum of $10,000. The court's decree empowers the two receivers to take full possession of the assets and to operate and conduct the business and employ such persons as are necessary for it to be continued.

F. T. C. Issues Complaint On Hosiery Stamping

Charging that Interwoven Stocking Co., New Brunswick, N. J., misled the trade by marking certain of its hosiery as "Made on machinery imported from England (genuine 6 x 3 ribbed)" and "Made on machinery imported from England (entirely hand embroidered)," the Federal Trade Commission declared that such markings gave the impression that the half-hose as well as the machinery was made in England and gave the firm twenty days in which to file a reply with the Commission. "It is alleged that the words 'imported from England' are stamped in large conspicuous type inside an oval in such a manner that the words 'imported from' appear immediately above and are read in conjunction with the word 'England', and the words 'Made on Machinery' appearing inside the top rim of the oval can be read in such a sense as to indicate merely that the hose were made by machinery and are 'Imported' from 'England'. In some instances, the complaint continues, the respondent has superimposed above the oval a simulation of the English Crown with the words 'Trade Mark' appearing under it and just above the oval, while underneath the oval appear the words 'Genuine 6x3 Ribbed'. By such representations, the respondent allegedly misleads the purchasing public into the erroneous belief that the products are machine made and are imported from England. The complaint alleges that use of the word 'Genuine' before '6x3 Ribbed' gives the further impression that such hose are imported from England, inasmuch as England was originally the only source through which a '6x3 Ribbed' hose could be obtained, though now machinery has been devised for its manufacture in America." When John Wyckoff Mettler, President of Interwoven, was advised of the F. T. C. notice he declared that the stand taken by the Commission is "Very highly technical and legalistic" and that he intends to carry the case beyond the F. T. C. if necessary.

Men's Nylon Hose by Propper-McCallum

The first offering of nylon half-hose was made recently by B. Altman & Co., New York City, who offered the new product in full-fashioned construction at $1.50 a pair, being the first store in the country to place them on sale. The hose selling at $10.50 a dozen are made on 42-gauge machines of 140 denier yarn. They did not carry the maker's name, being stamped simply with the usual nylon symbol and the words "Made expressly for B. Altman & Co." They have a mercerized cotton inner lining to prevent friction at the feet and a welt of nylon plated over 100s two-ply mercerized. Only three colors and sizes 10 to 12 could be offered in this initial showing which developed a brisk business but that could not be compared with that given to the women's nylon on May 15.

Apex Hosiery Files New Suit Against Union

The Apex Hosiery Co., Philadelphia, on August 14 filed a suit for $1,171,957 as alleged damages against the American Federation of Hosiery Workers, William Leader, Philadelphia branch president, Harry Omeig, treasurer of Local 706, and Huey Brown, secretary of the same local. The action is based on occurrences at the Apex plant during the 1937 sit-down that has developed long legal action that recently reached the United States Supreme Court. The latest action was filed in the Common Pleas Court in Philadelphia and in addition to the ordinary damages asks for punitive damages by reason of the "malicious" nature of the alleged acts of the union. There is also still pending the company suit against the city of Philadelphia.

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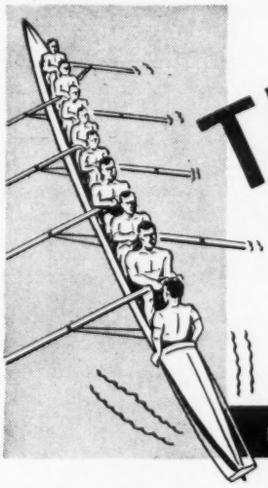

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TRENDS—YARN MARKETS

Commodities Find Resistance Points Causing Steadiness In Yarn Prices Notwithstanding Lack of Large New Business—Shipments Of Rayon Yarns Hit New 1940 Peak—Cotton Yarns Show Good Resisting Power At Recent Lows—War Situation Retards Wool Industry

Philadelphia, August 16, 1940

RAYON yarns are the highlight of the sales yarn markets again this month. While other yarns have been experiencing general dullness in respect to new poundage, rayon yarns in July hit a new peak so far as shipments were concerned with a total of 32,700,000 pounds. This large shipment caused a further reduction in the already small stocks in the hands of producers. In the cotton end of the market there are few signs yet of an early improvement but the feature here has been that prices have failed to hit new lows and spinners declare they are at cost and cannot go lower. Silk shows no great change from a month ago and there is not a great deal of forward coverage in this with the hosiery industry failing as yet to show the improvement expected seasonally. Fall coverage in knitted outerwear and half-hose is slow and cautious so that worsted yarn shipments and new business are lagging under the same period of 1939 with indications the season for the mills and spinners will be short and only fair.

Cotton Yarns

The last month has been marked by a general unwillingness of buyers to operate ahead so that what little new business has been placed has been for nearby shipment or in other instances fair amounts of cotton yarns have been bought to go into various types of garments for the greatly enlarged armed forces of the country. Sales spinners have been fairly busy in a majority of instances on old contracts on which manufacturers have been willing to take much larger shipments than they have been willing to place new contracts which has meant that spinners' unfilled balances have declined in the last month. Combed yarn spinners at present have about two months business ahead but there are large groups of such mills that are in possession of orders which will keep them busy for four to five months.

Military cloth demands have been extensive and considerable sales yarn business has been placed because of this and the bulk of such business has gone to combed yarn spinners in view of the fact that many government cloths and garments such as hosiery and underwear must be made from combed yarn. Prices of cotton yarns have eased approximately one-half cent in the last month or slightly more than the drop which has taken place in the raw cotton market in the same period of time. Sales yarn spinners complain that prices of their product are back again at cost or under and that they are worse off so far as profit margins are concerned than they were at the low point of 1939. As an example of this, 10s carded cones are now quoted around 20 cents which is not more than a cent above the low point of the previous year for the same spinning but offsetting this one cent difference spinners now are confronted with higher wage scales under the Federal Fair Labor Standards Act, than a year ago.

In addition they must pay higher prices for their raw cotton so that complaint from them is general that they are making less money than they were at the worst time of the previous year. Although new business has been slow indications are that the coming months will witness a change in this connection. With large sums being spent for rearmament purposes purchasing powers will increase extensively in the coming months so that retail demand for cotton goods is expected to be very good and at the same time the Government because of its greatly enlarged army and navy will have to come into the market for large quantities of such goods and in such instances it specifies the earliest possible deliveries. Because of this there is the possibility that spinners and manufacturers may become busy at the same time on government and civilian business.

Silk

Raw silk has not changed in price to an important extent over the last month but has been steady and more inclined to advance than to decline. At the present time it is a cent or two a pound higher than a month back but there is no large contracting ahead in it by the hosiery mills which for the most part are buying only a few weeks ahead and in reasonable but slightly larger amounts than a month ago. Reflecting a more active seasonal trend among the manufacturers, mill takings of raw silk in July increased sharply, thereby reversing the declining trend which had been in evidence since the start of the year. According to trade opinion a continuation of the larger mill takings is to be expected for the next few months. July total for mill takings was reported at 25,621 bales as compared with a low of 17,307 bales in June.

Even allowing for a fair amount of re-exports to England last month domestic consumption in the United States registered a substantial upturn in July. Re-exports to England in July were approximately 2,000 bales. Based on current commitments licensed shipments to England are expected to reach an even larger figure in August, some estimates putting them as high as 4,000 to 5,000 bales. Stocks of raw silk in this country failed to show the usual seasonal gain last month, since imports at 24,155 bales were lower than mill takings. Stocks declined to 40,356 bales at the end of the month as compared with 41,822 bales at the end of June. During the present month a further decline in stocks is believed likely since silk afloat to this country is estimated currently at only 22,900 bales. With shipments from Japan sharply lower than a year ago stocks of raw silk in that country registered a sharp increase last month.

Rayon

Shipments of rayon filament yarn to domestic consumers aggregated 32,700,000 pounds in July, the largest for any month in 1940. These shipments were slightly larger than the 31,400,000 pounds in June. The record July deliveries resulted in a reduction in producers' stocks of from 12,800,000 pounds at the end of June to 11,400,000 pounds at the end of July. Production of rayon yarn reached a record total of 97,500,000 pounds during the quarter ended June 30. While rayon producers are of the opinion that consumers may show a little less eagerness to seek yarn supplies over the next few weeks they are of the opinion that shipments for the present quarter will leave little if any reserved stocks on their hands. Reports of an impending upward revision in yarn prices are less frequent now although any change would be upward due to rising raw material and labor costs.

Worsted Yarns

Wool prices have been steady and there has been little change in the wool top futures market so that worsted yarn prices have been without important change this month. As a rule the outerwear industry as well as manufacturers of wool half-hose have been placing business in a very cautious manner with total poundage usually averaging 10 to 15 per cent under a year ago. Manufacturers and goods buyers are proceeding so cautiously because of the uncertainties arising out of the war. They are afraid that an early and sudden peace would see considerable liquidation in wool all over the world with a resultant inventory drop in all types of goods made of wool. But looking ahead for a few weeks spinners can see no reason why current values should be disturbed because yarn and goods prices are approximately at cost now.

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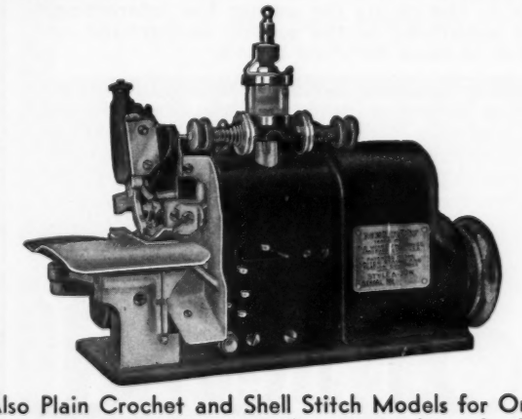

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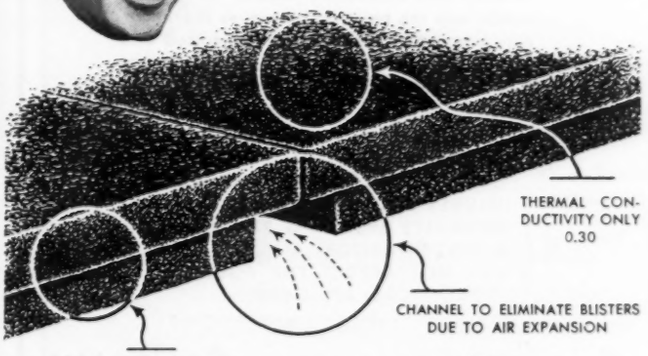
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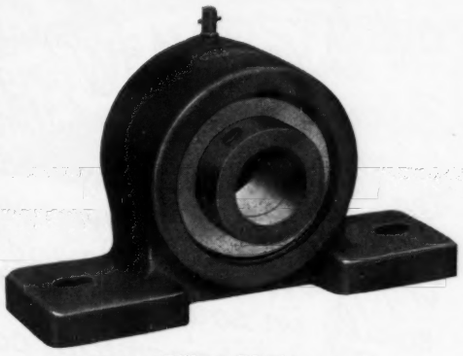

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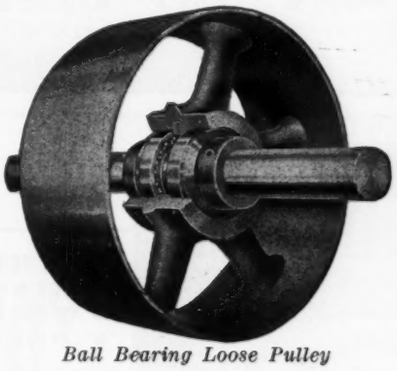

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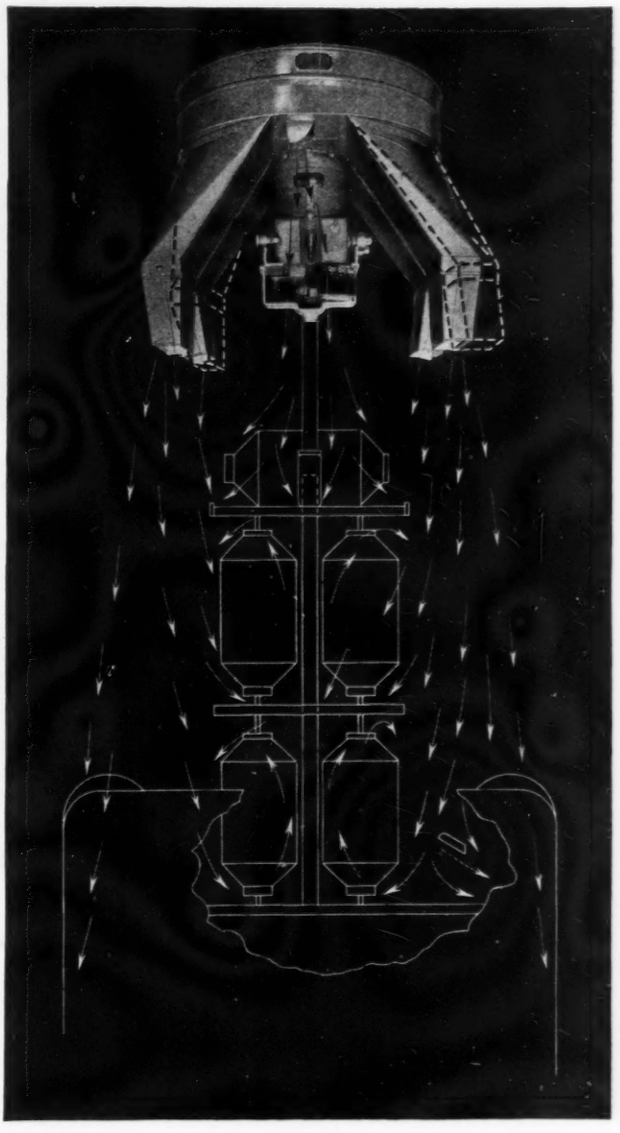

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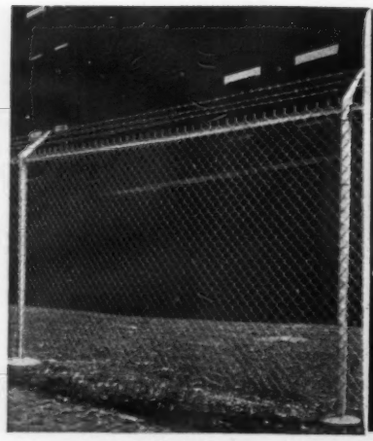

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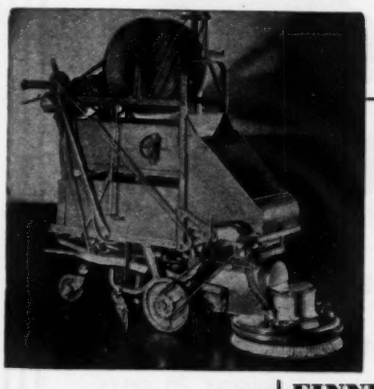

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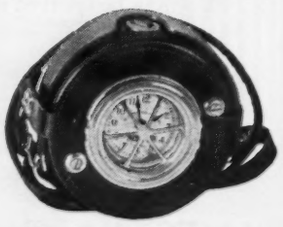

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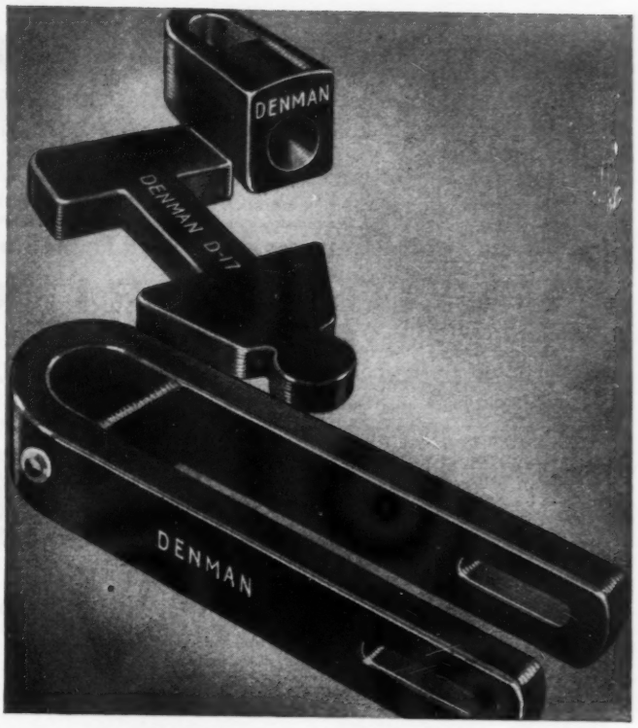

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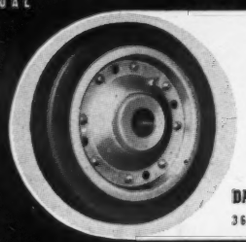

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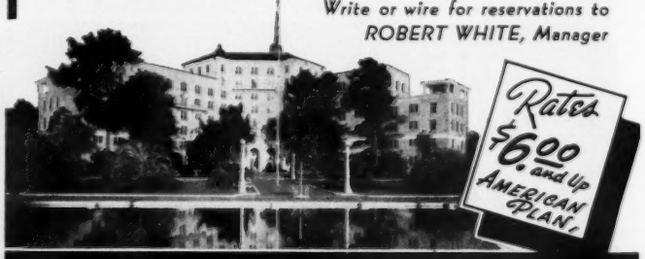

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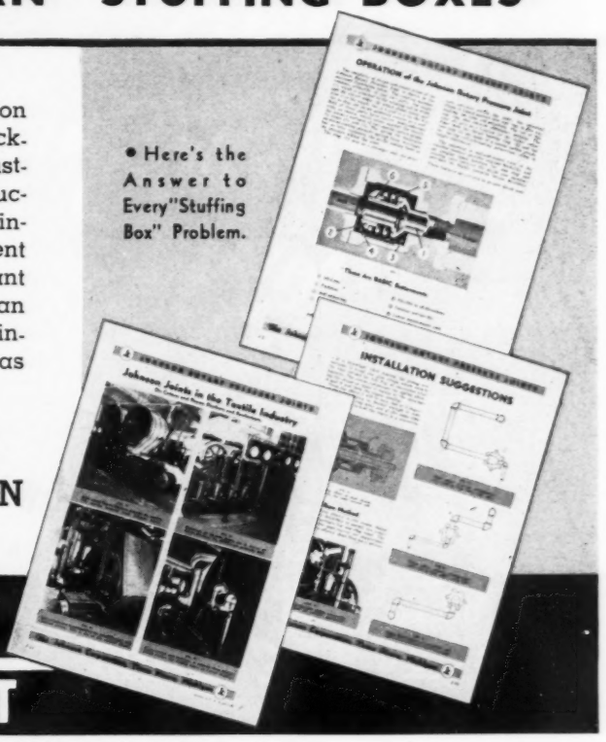

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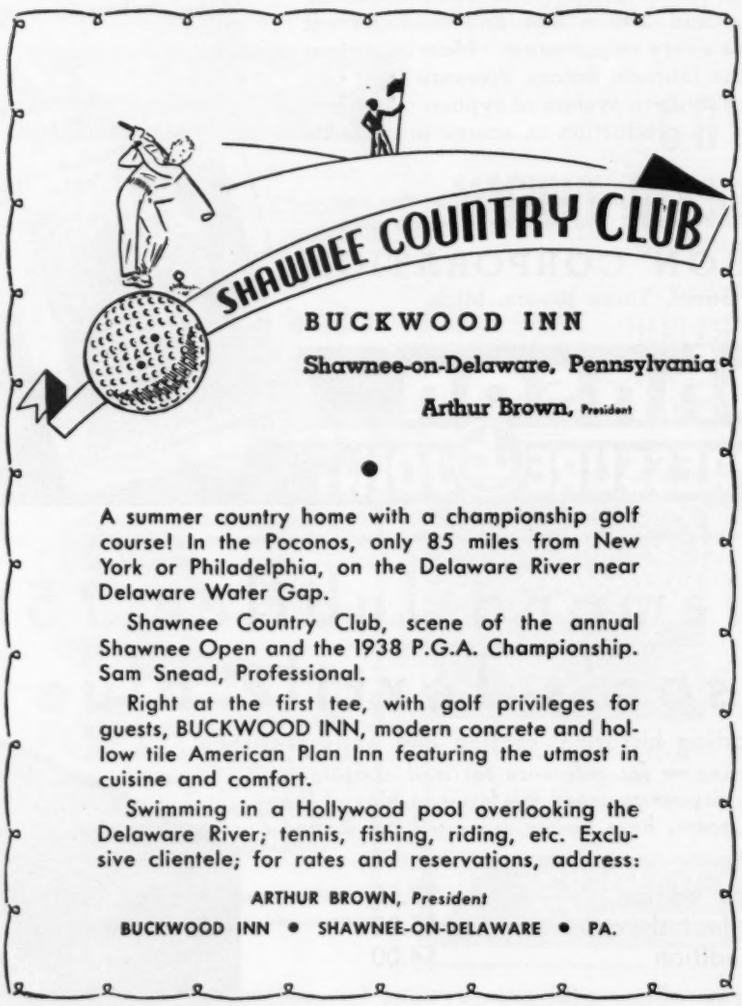

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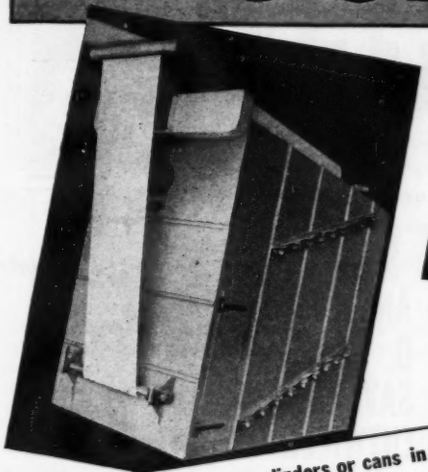

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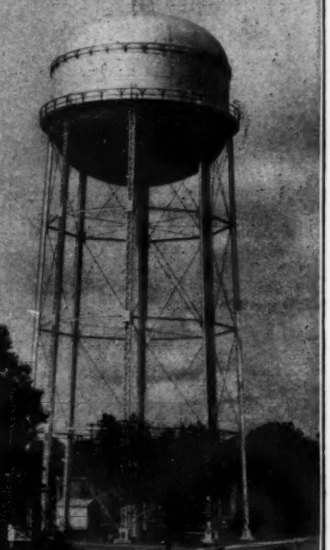

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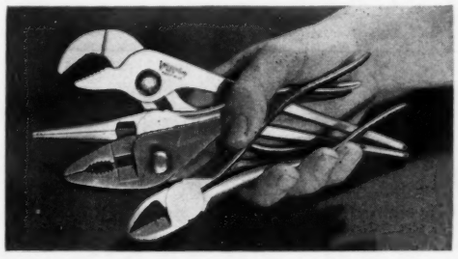

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... a safe Job

Insure safe workmanship and fast, accurate operation on all jobs where pliers are required for gripping—tugging—twisting—bending—cutting—by being equipped with exactly the proper type and size tool. Snap-on "Vacuum Grip" Pliers are built the way you'd build them with jaws that GRIP and cutters that CUT—and with the structural strength that can slug it out, toe to toe, with any job . . . yet they are so finely finished that they easily handle the most delicate work. Try them on the job yourself — you'll say, "It's a pleasure to work with such tools."

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STANDARD AND SPECIAL WRENCHES AND HAND TOOLS *for*
LOOM
SPINNING
TWISTER
SPOOLER
CARD ROOM FRAME
OPENING & PICKER
FIXERS
also
MACHINE SHOPS AND GEN. UTILITY

Snap-on Specialized TEXTILE TOOLS

Snap-on Tools Corporation
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SYNTHETIC DETERGENT

FOR WETTING FOR BLEACHING
FOR SCOURING FOR DYEING

A new low cost synthetic organic sulfonate of exceptionally high detergent value. Effective in hard water, acid, or alkaline baths.

BURKART-SCHIER CHEMICAL CO.
CHATTANOOGA, TENNESSEE
MANUFACTURING CHEMISTS FOR THE TEXTILE INDUSTRY

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BUSINESS—EMPLOYMENT—EQUIPMENT—PROFESSIONAL CARDS—OPPORTUNITIES

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Rates are net, payable in advance each month. No commission or discounts. Page is 3 columns, 10 inches deep—30 inches to page. Space measured by even inch vertically by 1, 2 or 3 columns in width. Column width 2¼ inches. Rates based on the total space used in one year.

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Box number address care of COTTON, Grant Bldg., Atlanta, Ga., count as eight words.

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Four 18-section 42-gauge Reading leggers and one 20-section Reading 42-gauge footer. All machines are equipped with ringless and picot attachments and are in good running order. Box 508, c/o "COTTON", Grant Bldg., Atlanta, Ga.

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POSITION WANTED

As Overseer or Assistant Overseer of Carding. 27 years old, married and with experience covering colored yarn, rayon, rayon and cotton mixtures. Have finished an I. C. S. course in Carding and Spinning. Address Box 505, care COTTON, Grant Bldg., Atlanta, Ga.

POSITION WANTED

Wanted, position as second-hand in card room. Age 46. I have completed an I.C.S. course in carding and spinning. Address Box 509, care COTTON, Grant Bldg., Atlanta, Ga.

Paul B. Eaton

PATENT ATTORNEY

1408 Johnston Bldg., Charlotte, N. C.

514 Munsey Bldg., Washington, D. C.
Former Member Examining Corps
U. S. Patent Office

AVAILABLE

Textile mill overseer—supervisor and superintendent acquainted with all phases of manufactured cotton products and all departments. High school graduate; middle aged; native American. Address 300 B. St., S.E. (274) Washington, D. C.

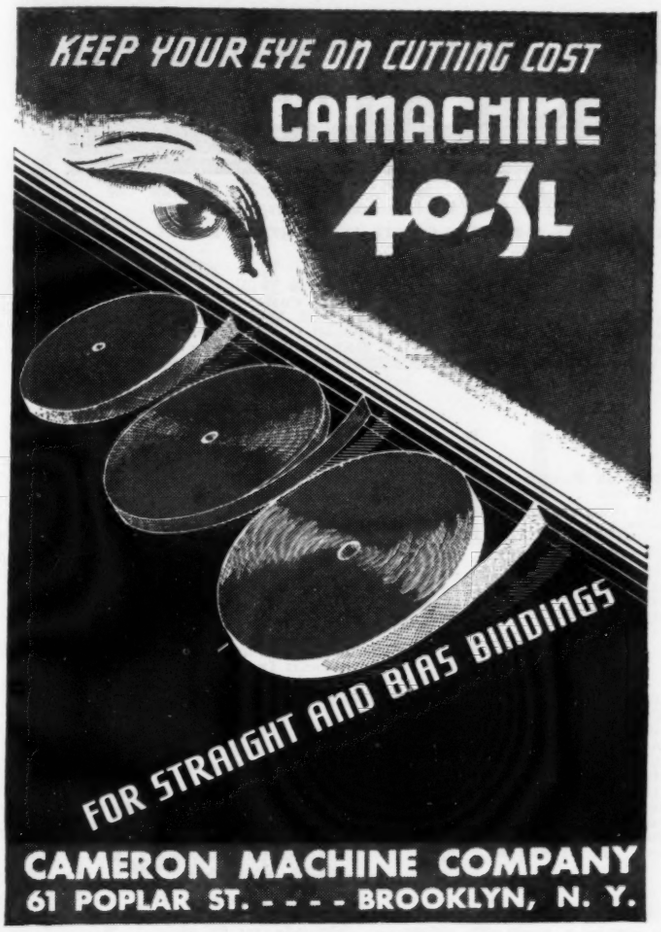
Your Advertisement on This Page

will produce results at small cost. Do you desire a position? Do you desire a good man to fill a vacancy in your mill? Do you desire your business or professional card placed before the textile industries?

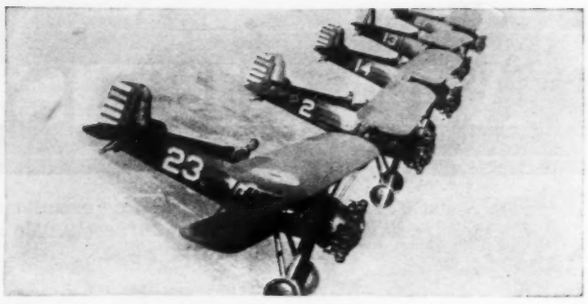
Why not try an advertisement on this page of COTTON? Its 12,600 copies per month reach the textile executives, superintendents and heads of departments throughout the industry.

Note the rates above and send in your advertisement today.

COTTON, Grant Bldg., ATLANTA, GA.



CAMERON MACHINE COMPANY
61 POPLAR ST. - - - - BROOKLYN, N. Y.



TOP SPEED *WHEN YOU NEED IT!*

Could your machinery produce more if you had different rings—rings that permit top speed when you need it? If your spinning rings are getting worn, for example, simple replacement with new DIAMOND FINISH rings usually can be counted on to increase production 10% or more. Users of our Eadie rings have been able to step up production by far greater percentages over previous operation on cotton, worsted, silk and rayon twisting, also wool spinning. For top-speed rings, consult DIAMOND FINISH!

WE MAKE ALL TYPES OF HOLDERS

WHITINSVILLE (MASS.)
SPINNING RING CO.
Makers of Spinning and Twister Rings since 1873

DIAMOND FINISH

Southern Representative H. ROSS BROCK, 3 Vannoy St., Greenville, S. C. Tel. 2824

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"ATLAS BRAND"
EMERY FILLETING

"The New Flexible" "Needs No Damping"

Stocks in all the leading Mill Centres — TRADE MARK ATLAS — The Standard Card-Grinding Medium

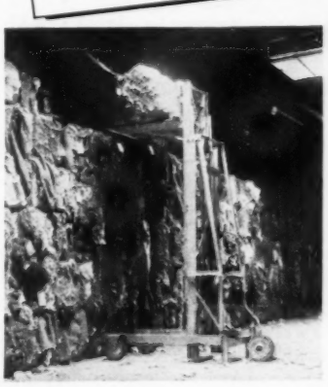
GUARANTEED "A" QUALITY
THE ONLY QUALITY WE MAKE

Used the wide world over, like
The DRONSFIELD CARD-GRINDERS

Stocked by the
Principal
Mill Supply Houses
Sole Agents for Dronsfield's Machinery for U. S. A.:—
John Hetherington & Sons, Inc.
72 Lincoln St., Boston, Mass.

ECONOMY TIP—

Save Real Money ON COTTON STORAGE with Economy Lifters



Economy Lift in Action—

Mills can save money, time and labor during the cotton storage season with an Economy Lifter doing the work.

Standard Lifters can be built in any capacity up to 5,000 pounds while special machines can be designed for any service. Cotton stackers, loom beam machines and other types designed for the textile industry.

The Telescoper is especially designed for working under saw tooth roofs, warehouse ceilings, beams, doorways, varying its height to suit the job.

The same machines can be used throughout the year with a definite saving in loading cloth into freight cars, overhead maintenance and repairs. Power costs are low and models are available for every textile usage.

Write TODAY for Full Information

ECONOMY ENGINEERING CO.
2665 West Van Buren St., Chicago, Ill.

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THE PURE

PURE THREE POINT LUBRICATION
A Complete Line of Industrial Petroleum Products

PURE
THE PURE OIL COMPANY, U.S.A.

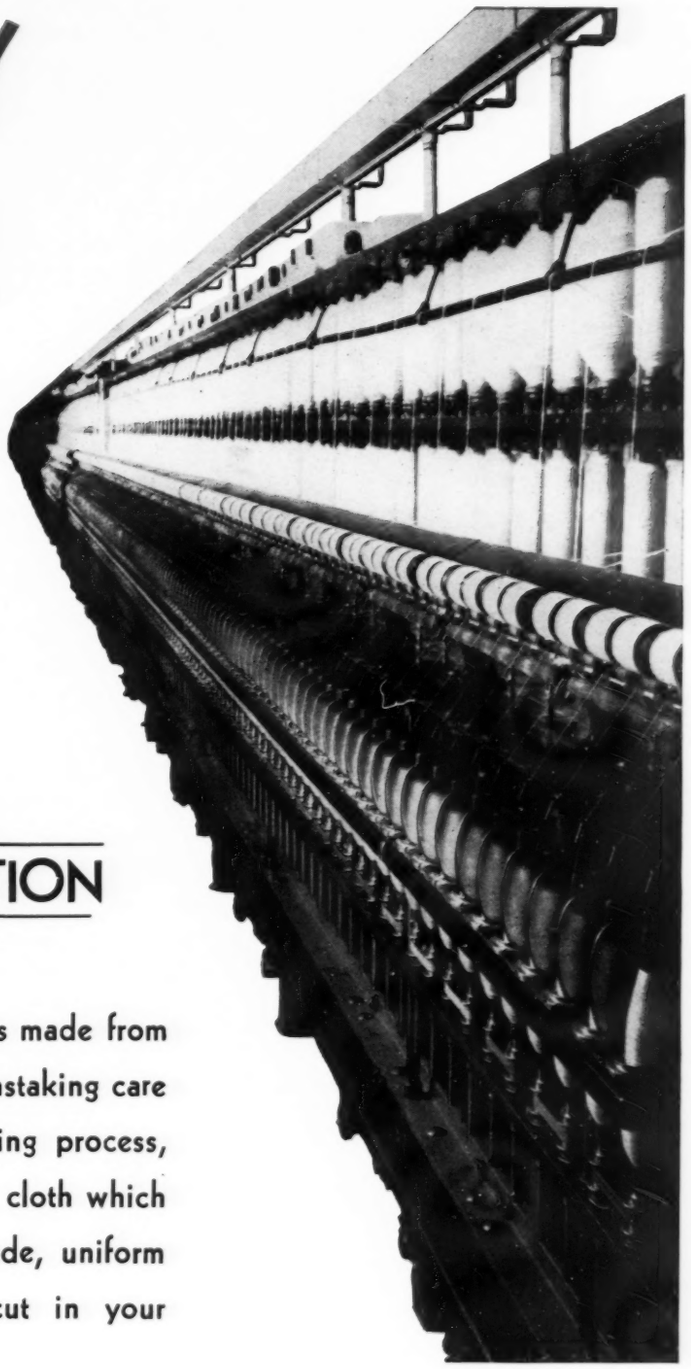
A Pure Oil engineer will help solve your lubrication problems. Write today.

OIL CO.
CHICAGO U.S.A.

ALBANY ROLLER CLOTH

for

ECONOMY
QUALITY YARN
GREATER PRODUCTION



Because ALBANY ROLLER CLOTH is made from carefully selected raw material, with painstaking care bestowed on every step of the manufacturing process, users are assured of a resilient, unvarying cloth which retains its cushion and produces high grade, uniform yarn, with less end breakage. Test a cut in your own plant.

ALBANY ALSO MAKES

- Sanforizing Blankets
- Palmer Blankets
- Printing Blankets
- Printers Lappings
- Slasher Cloth
- Slasher Jackets
- Clearer Cloth
- Laundry Flannel
- Vigoreaux Jackets

ALBANY FELT CO. ALBANY NEW YORK

★ ★ ★ ***and* THEN *came***

PAROLITE

REG. U.S. PAT. OFF.

the SOLUTION to DIFFICULT STRIPPING PROBLEMS

With the introduction of **PAROLITE** in 1937, a new era of quality, efficiency, and economy was begun for men concerned with the stripping of acetate and woolen fabrics. ★ **PAROLITE**, in similar manner to our other products, was developed after years of experimenting. It is used mainly for the stripping of the most difficult colors that can't be stripped with Vatrolite, Discolite, or ordinary Hydrosulphites. ★ A few of its outstanding qualities are..

1 ★ It is water soluble..therefore no zinc dust remains in the finished material.

2 ★ It forms a clear solution when dissolved.

3 ★ Stripped materials are free of dirty and gritty particles.

4 ★ **PAROLITE** does not deteriorate if it is stored in a dry place.

5 ★ Due to its high concentration, **PAROLITE** is economical . . one pound approximating the work of one and a half (1½) pounds of the average powdered stripper, or seven (7) pounds of liquid stripper.

★ ★ ★ ★ ★

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***Your stripping problems will be light . . when you start using* PAROLITE**

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Manufacturers of Hydrosulphite and Sulphonated Oils of all types

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